

# **Environmental Monitoring Report**

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**Public**  
**Project No. 51137-003**  
**Semestral Report (July-December 2024)**  
**February 2025**

**Bangladesh: Dhaka and Western Zone Transmission Grid Expansion Project**

Prepared by Power Grid Company Limited (PGCB), Government of Bangladesh for the Asian Development Bank (ADB).

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# **SEMI ANNUAL ENVIRONMENTAL SAFEGUARD MONITORING REPORT: DHAKA AND WESTERN ZONE TRANSMISSION GRID EXPANSION PROJECT**



**JULY- DECEMBER 2024**

**FINAL REPORT**

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## ABBREVIATIONS

|         |   |                                                               |
|---------|---|---------------------------------------------------------------|
| ADB     | : | Asian Development Bank                                        |
| AIS     | : | Air insulated Switchgear                                      |
| BIWTA   | : | Bangladesh Inland Water Transport Authority                   |
| CAP     | : | Corrective Action Plan                                        |
| CESMP   | : | Construction Environment and Social Management Plan           |
| DC      | : | Deputy Commissioner                                           |
| DoE     | : | Department of Environment                                     |
| DWZTGEP | : | Dhaka and Western Zone Transmission Grid Expansion Project    |
| ECC     | : | Environmental Clearance Certificate                           |
| ECC     | : | Environmental Clearance Certificate                           |
| EHS     | : | Environmental Health and Safety                               |
| EMF     | : | Electro Magnetic Force                                        |
| FGD     | : | Focus Group Discussion                                        |
| FGL     | : | Finished Ground Level                                         |
| FY      | : | Fiscal Year                                                   |
| GCC     | : | General Conditions of Contract                                |
| GIS     | : | Gas Insulated Switchgear                                      |
| GRC     | : | Grievance Redress Committee                                   |
| GRM     | : | Grievance Redress Mechanism                                   |
| HFL     | : | Highest Flood Level                                           |
| ICNIRP  | : | International Commission on Non-Ionizing Radiation Protection |
| IEE     | : | Initial Environment Examination                               |
| kWh     | : | kilo Watt hour                                                |
| LILLO   | : | Line In Line Out                                              |
| MVA     | : | Mega Volt Ampere                                              |
| PIU     | : | Project Implementation Unit                                   |
| PMU     | : | Project Management Unit                                       |
| PPE     | : | Personal Protective Equipment                                 |
| RoW     | : | Right of Way                                                  |
| SCC     | : | Special Conditions of Contract                                |
| SPS     | : | Safeguard Policy Statement                                    |

## EXECUTIVE SUMMARY

- i. The Dhaka and Western Zone Transmission Grid Expansion Project (DWZGEP) of a total investment of \$730.0 million will ensure that the capacity of electricity supply in Dhaka and western zone of Bangladesh is upgraded, with improvements in the technical efficiency of the transmission system. The proposed project is expected to provide support for the construction of new substations and transmission lines and support the improvement of the existing transmission network of Power Grid. The DWZTGEp will also strengthen the power transmission system in southwest and northwest Bangladesh to enhance its reliability and efficiency. The project area comprises agricultural land, where, due to inadequate surface water supply, cultivation mostly depends on groundwater. Hence electricity demand is at its peak during the irrigation season. Furthermore, the electricity demand in the southwest is expected to rise in the near future with large scale industrialization expected as construction of the Padma Bridge has been completed. The subprojects of DWZTGEp are situated in five administrative divisions and twenty-one districts of Bangladesh, comprising construction of 15 new substations, ten overhead transmission lines and ten Line-In Line-Out (LILo) connections of a total length of 394 km overhead lines, 9.5 km underground lines in Dhaka, and bay extensions in 9 existing grid substations. All the subprojects are located in agricultural lands and in settlement areas. No ecologically sensitive habitats or national protected areas are found in the project area. According to the Environment Conservation Act 1995 and Environment Conservation Rules 2023 of Bangladesh, transmission lines more than 25 km are categorized as 'Red category' projects that require an Initial Environmental Examination (IEE) for site clearance and environment clearance. Environmental Clearance Certificate from Department of Environment has been issued on 28/07/2020 and valid till 28/07/2025. According to the Environment Conservation Rules 2023 transmission lines (more than 25 km) is categorized as 'RED Category' project<sup>1</sup>. The project also needs to comply with Asian Development Bank (ADB)'s safeguard requirements. IEE document has been prepared to fulfill environmental assessment requirements under ADB's Safeguard Policy Statement (SPS) 2009. IEE is updated and disclosed whenever any unexpected impacts or design changes occur during project implementation. The IEE study has been done based on both primary and secondary data. A composite and interdisciplinary approach has been developed for this study, based on the guidelines of DoE and ADB's SPS 2009. A scoping process was followed to identify Important Environmental (IECs) and Social Components (ISCs), which are likely to be impacted by interventions of the project. Impacts on ecological resources will be minimal and localized in all phases of the project because there is no ecological or environmentally sensitive area. The Right of Way (RoW) of the transmission lines and the lands for the grid substations (GSs) are on low lying ground. Lands along the transmission lines are predominantly cultivated, at least in the dry season, and have homestead activities. Rice-based crops are grown mainly in the dry season along with potatoes, onions, mustard, garlic, jute and other vegetables. An area of 79.60 acres land in 15 new substations plus one existing substation and 1 acre of land tower footings, will be changed from the land type of agricultural use and fisheries. The proposed bay extensions would not require land acquisition as the required land extents are available within the existing GSs premises, except for Satkhira, which needs 3 acres for the bay extension. There will be a minor impact of noise for short periods during construction of foundations for the transmission line towers and also result in temporary increase in traffic, but work will take place during daytime and residents close by will be warned of any foundation piling activity. The transmission and LILo lines will traverse some populated areas. Therefore, inspection of existing electromagnetic fields (EMF) along the selected routes of existing and new transmission lines in populated areas would be important. For housing structures, clearance between the transmission line and roof tops should be 6.5m-8m and for river crossings it will be 14.6m-15.9m which will be ensured through using towers of appropriate extensions. The estimated EMF values are within the ICNIRP public exposure limits. No houses or people will be directly affected by the EMF of transmission and LILo lines.

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<sup>1</sup> Schedule 1, Environment Conservation Rules 2023

- ii. During the construction phase of the project, there will be some environmental impacts with machinery and vehicle movement for construction tower foundations, the erection of towers and stringing of conductors. Various activities will take place for towers and new GSs construction including land filling, storage of construction materials, activities of workers and movement of construction vehicles. Mitigation measures are proposed in the Environmental Management Plan (EMP) and is included in contracts to ensure that good practices are observed as per the measures identified in the EMP. PMU ensures that EMP is being strictly followed during the project implementation time.
- iii. A Grievance Redress Mechanism (GRM) has been established. The Power Grid has set up a Project Management Unit (PMU) to implement the project. The implementation of EMP and CAP will be monitored to ensure the ADB's SPS 2009 will be met. This safeguard report highlights project progress details including any environmental and social safeguard issue.

**Table 1: Project Information**

| <b>Project Name: Dhaka and Western Zone Transmission Grid Expansion Project</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Executing Agency                                                                | Power Grid Bangladesh PLC (Power Grid)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Implementing Agency                                                             | Power Grid Bangladesh PLC (Power Grid)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Environment Safeguards Categorization                                           | B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Environment Safeguards Documentation                                            | IEE/Existing Facilities CAP/EMP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Project Stage Obtained                                                          | Design/Construction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Detailed Design Required Post-Approval                                          | <p>Design service is included in EPC contractor's scope, approval required from Power Grid.</p> <p>Detailed design approved for following transmission line subprojects:</p> <ol style="list-style-type: none"> <li>1. Satkhira Manirampur</li> <li>2. Satkhira-Rupsha</li> <li>3. Kushtia-Meherpur</li> <li>4. Kaliganj-Maheshpur</li> <li>5. Purba Sadipur-Domar</li> <li>6. Domar-Hatibandha</li> <li>7. Niamatpur-Patnitala</li> <li>8. Gopalganj-Shibchar</li> <li>9. Bagerhat-Pirojpur-Bhandaria</li> <li>10. LILO of 132 kV Noapara-Khulna TL to Phultola</li> <li>11. LILO of 132 kV Goalpara-Bagerhat TL to Rupsha</li> <li>12. LILO of 132 kV Gopalganj-Gallamari TL to Rupsha</li> <li>13. LILO of 230 kV Rupsha PP-Khulna (S) TL to Rupsha</li> </ol> <p>Layout approved for following substation subprojects:</p> <ol style="list-style-type: none"> <li>1. Kaliganj 400/230 kV Substation</li> </ol> |

| Project Name: Dhaka and Western Zone Transmission Grid Expansion Project |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                          |  |  |  | 2. Purbachal 400/230/132 kV Substation<br>3. Rupsha 230/132/33 kV substation<br>4. Phultola 132/33 kV Substation<br>5. Manirampur 132/33 kV Substation<br>6. Meherpur 132/33 kV Substation<br>7. Maheshpur 132/33 kV Substation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Contract(s) Awarded                                                      |  |  |  | 4 for transmission line construction (packages 1, 2, 3 and 4) and 3 for substation construction (packages 5, 6, and 7) in total. The contract for package-8 has been terminated on contractor's default and rebidding has been initiated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Bidding Document(s) Include EMP Cleared by ADB                           |  |  |  | 8 bid documents (4 transmission lines & 4 substations) have been cleared by ADB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Contract(s) Awarded Include EMP Cleared by ADB                           |  |  |  | YES, 4 for transmission line construction and 3 for substation construction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| National Environment, Health and Safety Clearance(s) Obtained            |  |  |  | YES, ECC was valid till 28/07/2025,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Contractor(s) Given Access to Site                                       |  |  |  | YES, 13 for transmission line construction and 7 for substation construction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Construction Progress (%)                                                |  |  |  | <p>Construction progress for the following subprojects that have started on site:</p> <p>Package-2: HDD, making cable trench and cable laying ongoing. Physical progress is approximately 70% as of December 2024.</p> <p>Package-3: Tower foundation and erection works of Satkhira-Manirampur, Satkhira-Rupsha, Kushtia-Meherpur and Kaliganj-Maheshpur transmission lines are ongoing, overall progress is approximately 70% as of December 2024.</p> <p>Package-4: Tower foundation and erection works of Gopalganj-Shibchar, Purba Sadipur-Domar, Niamatpur-Patnitala, Domar-Hatibandha and Bagerhat-Pirojpur-Bhandaria transmission lines are ongoing, overall progress is approximately 75% as of December 2024.</p> <p>Package-5: 90% Land development work at Kaliganj 400/230 kV substation is ongoing.</p> <p>Package-6: Land development at Purbachal 400/230/132 kV substation has been completed as of December 2024.</p> <p>Package-7: Civil works at Rupsha, Phultola, Manirampur, Maheshpur and Meherpur substations are</p> |

| Project Name: Dhaka and Western Zone Transmission Grid Expansion Project                             |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                      |  |  | <p>ongoing. Land development is ongoing at Satkhira. Physical progress is around 25% as of December 2024.</p> <p>Package-8: The contract has been terminated effective from 27/05/2024.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Unanticipated Impacts including Change of Scope or Design                                            |  |  | <p>Scope of package-1 has been reduced significantly, the draft bid document incorporating the revised scope has been cleared by ADB.</p> <p>Changes in alignment of routes for 2 transmission line contracts awarded, Addendum 1 to IEE has covered the following subprojects:</p> <ol style="list-style-type: none"> <li>1. Satkhira-Manirampur</li> <li>2. Gopalganj-Shibchar</li> </ol> <p>Addendum 2 to IEE covered the following subprojects:</p> <ol style="list-style-type: none"> <li>1. Satkhira-Rupsha</li> <li>2. Purba Sadipur-Domar</li> <li>3. Niamatpur-Patnitala</li> </ol> <p>Addendum 3 to IEE covered the following subprojects:</p> <ol style="list-style-type: none"> <li>1. Kushtia-Meherpur</li> <li>2. Domar-Hatibandha</li> <li>3. Bagerhat-Pirojpur-Bhandaria</li> </ol> <p>Addendum 4 to IEE covered the following subprojects:</p> <ol style="list-style-type: none"> <li>1. Kaliganj- Maheshpur 132 KV Double Circuit Transmission Line</li> <li>2. 230/132/33 KV GIS Substation at Rupsha</li> <li>3. 132/33 KV GIS Substation Meherpur</li> <li>4. 132/33 KV GIS Substation Manirampur</li> <li>5. 132/33 KV GIS Substation Maheshpur and</li> <li>6. 132/33 KV GIS Substation Phultola</li> </ol> <p>Addendum 5 to IEE covered the following subprojects:</p> <ol style="list-style-type: none"> <li>1. Rampura- Bashundhara 132kV double circuit underground cable line</li> <li>2. 400/230 kV Indoor GIS Substation: Kaliganj (Gazipur)</li> <li>3. 400/230 kV Indoor GIS Substation: Purbachal</li> </ol> |
| Number of Site Inspections and Audits Undertaken by Environment Safeguards Staff in Reporting Period |  |  | 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Corrective Action Required from Previous Reporting Period                                            |  |  | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Outstanding Corrective Action this Reporting Period                                                  |  |  | Yes. Six (06) Corrective Actions were identified during this reporting period                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Project Name: Dhaka and Western Zone Transmission Grid Expansion Project     |  |                                                                                                                                                                    |
|------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Non-Compliances Recorded this Reporting Period                               |  | Six (06)                                                                                                                                                           |
| Corrective Action Required                                                   |  | YES                                                                                                                                                                |
| Number of Health and Safety Incidents                                        |  | 2 (minor)                                                                                                                                                          |
| GRM Functional                                                               |  | YES, GRM functions at construction sites of packages 2, 3, 4, 5, 6 and 7. For other packages, it will be made functional once the construction activity commences. |
| Number of Unresolved Grievances from Prior Reporting Period                  |  | 0                                                                                                                                                                  |
| Number of Grievances Received in Reporting Period                            |  | 0                                                                                                                                                                  |
| Number of Grievances Resolved this Reporting Period                          |  | 0                                                                                                                                                                  |
| Number of Grievances Still Outstanding                                       |  | 0                                                                                                                                                                  |
| Number of Grievances referred to Court of Law                                |  | 0                                                                                                                                                                  |
| Number of Grievances referred to the Accountability Mechanism                |  | 0                                                                                                                                                                  |
| Total Training Conducted                                                     |  | 50                                                                                                                                                                 |
| Total consultation carried out                                               |  | 7                                                                                                                                                                  |
| Number of packages that conducted Quarterly Environmental Quality Monitoring |  | 3 (Package 2, 5 & 6)                                                                                                                                               |

# 1 INTRODUCTION

1. The development policy framework of the Government of Bangladesh envisages sustainable development and moving towards a middle-income threshold by year 2021. The per capita income is rising steadily, from \$1,110 in 2014 to \$1,675 in 2018. The GDP growth rate in 2016 was 7.2% while in 2018, it further increased to 7.9%, meeting the national economic growth target of 7.0%. In contrast, the per capita grid electricity consumption in Bangladesh is only 336 kWh, which is lower than its neighboring countries. Electricity consumption is growing rapidly at an annual rate of over 6%, largely due to the growth in per capita income, increasing industrialization and the expansion of the agriculture and commercial sectors. Energy demand is expected to increase threefold by 2035 as the government rolls out connections to rural households and Bangladesh continues on a trajectory of strong economic growth. Electricity demand would need to increase to 33,708 MW by 2035 to meet the desired service quality and quantity projected under future growth. In the endeavor to become a high-income country by 2041, development of energy and power infrastructure is vital for Bangladesh.
2. The government's strategy is to promote power sector, and it has embarked on implementation of a master plan to add low cost, base load power generation capacity to compensate for declining domestic gas production and replacement of expensive diesel and fuel oil-based power plants. It provides subsidies, including lifeline consumption, to support the objective of increasing electricity distribution to all parts of the country. For the energy sector, national targets include increased access to electricity, from 93% in 2018, and reaching 100% by 2021. Increase in per capita consumption, from 170 kWh in 2010 to a target of 514 kWh by 2020 is anticipated.
3. The Power Division, under the Ministry of Power, Energy and Mineral Resources (MPEMR) leads the power sector while the Bangladesh Energy Regulatory Commission (BERC) is the regulatory body which regulates electricity, gas, and petroleum sectors. The electricity sector is unbundled into generation, transmission, and distribution segments. Backbone transmission lines and substation network in the country are operated by the Power Grid Company of Bangladesh Limited (Power Grid). As of December 2018, Power Grid network comprised transmission lines operated at 400 kV, 230 kV and 132 kV voltage levels with a total length of 11,396 circuit km and 125 132/33 kV substations with a cumulative capacity of 20,211 MVA. Development of transmission and distribution network in line with generation has been identified as a key element of the power sector strategy in the 'Bangladesh Seventh Five Year Plan FY 2016 – FY 2020'. Development of an inter-region transmission network is required due to the imbalance in concentration of generation and demand, while local network expansions are required to cater to the increasing demand at new load centers. Due to the growing electricity demand, a considerable number of grid substations and transmission lines have already been overloaded. Therefore, urgent upgrades and expansions are required by Power Grid to supply power to the key economic corridors in the southern and western regions including the greater Dhaka area.
4. The Dhaka and Western Zone Transmission Grid Expansion Project (DWZTGEP) focuses on expanding the local transmission network to deliver electricity to new and expanding load centers while meeting the network operating criteria.
  - a) **Component 1: Transmission system in Greater Dhaka expanded.** The project will construct and commission substations with a total capacity of 4,450 MVA and 40 km of transmission lines in Greater Dhaka.
  - b) **Component 2: Transmission system in Western Zone expanded.** The project will construct and commission substations with a total capacity of 3,070 MVA and 368 km of transmission lines in the western zone.
  - c) **Component 3: Institutional Capacity of Power Grid strengthened.** The project will enhance capacity by establishing a Drone Inspection Center within the operation and maintenance department of Power Grid with some gender equality elements.

## 1.1 Scope of the Project:

### A. 400 kV Transmission Line: 02 km

- i. LILO of Ghorashal-Kaliganj-Purbachal-Bashundhara transmission line to Kaliganj and Purbachal: 01 km each

Previously this scope included construction of Kaliganj-Purbachal 400 kV transmission line (18 km). However, due to RoW issues on another project of Power Grid, the scope has been revised and it has been decided that the Kaliganj-Purbachal line will be built by that project of Power Grid as a part of Ghorashal-Kaliganj-Purbachal-Bashundhara line. Only connection from this line to Kaliganj and Purbachal substations will be made under DWZTGE Project, each connection will be 01 km, so 02 km in total. Hence scope has reduced significantly and there will be less environmental impact due to the scope reduction. Also, since Kaliakoir-Bhulta 400 kV line has not been constructed yet, LILO of this line to Kaliganj has been excluded.

### B. 230 kV Transmission Line: 138.5 km

- i. LILO of Tongi–Ghorashal 230kV double circuit line at Kaliganj: 3.5 km
- ii. Satkhira-Rupsha 230 kV double circuit line (initially charged at 132 kV): 62 km with 0.7 km river crossing line.
- iii. Purba Sadipur -Domar 230 kV double circuit transmission line (Initially Charged at 132kV): 46.5 km.
- iv. Gopalganj (N)-Shibchar 230 kV double circuit line (initially charged at 132 kV): 25 km with 0.4 km river crossing line.
- v. LILO of Rupsha Power Plant- Khulna (S) double circuit 230 kV Line at Rupsha Substation: 0.5 km
- vi. LILO of Barishal-Bhola-Borhanuddin double circuit 230 kV Line at Bhola substation: 1 km

Due to the unavailability of required land, both Purbachal 400kV and 230 kV substations will be constructed in the same area. Hence lines connecting the substations (Purbachal 400 kV – Purbachal-2 230 kV double circuit underground cable line: 5km and River Crossing portion of Purbachal 400 kV – Purbachal-2 230 kV double circuit line: 0.5 km) will no longer be required.

### C. 132 kV Transmission Line: 244 km

- i. Rampura-Bashundhara 132kV double circuit cable line: 11.0 km underground

Previously the route length was determined as 9.5 km. However, in order to avoid conflict with the under-construction metro line in the vicinity of the proposed route, the route has been revised slightly and route length has increased to 11.0 km.

- i. Satkhira-Manirampur 132 kV double circuit line: 33 km
- ii. Kaliganj-Maheshpur 132 kV double circuit line: 28 km
- iii. Kushtia-Meherpur 132 kV double circuit line: 48 km
- iv. Niamatpur-Patnitola 132 kV double circuit line: 32.5 km
- v. Domar-Hatibandha 132 kV double circuit line: 35 km with 850 m river crossing line.
- vi. Bagerhat-Pirojpur-Bhandaria 132 kV double circuit line: 49.5 km with 1.3 km river crossing line.
- vii. LILO of Goalpara-Bagerhat 132 kV double circuit line at Rupsha: 3.5 km
- viii. LILO of Gopalganj-Gallamari 132 kV double circuit line at Rupsha: 0.5 km
- ix. LILO of Noapara-Khulna Central double circuit 132kV line at Phultola: 1 km
- x. LILO of Madaripur- Faridpur 132 kV double circuit line at Bhanga: 0.5 km
- xi. LILO of Barishal-Bhandaria double circuit 132kV line at Jhalokathi: 1.5 km

### D. 400 kV Substation: 02 nos.

- i. 400/230/132 kV Indoor GIS Substation: Purbachal with 3×52/750 MVA 400/230 kV transformers and 2×350/450 MVA 230/132 kV transformers.

The original plan was to construct Purbachal 400/230 kV and Purbachal-2 230/132 kV substations at sites approximately 5.5 km apart. However, required land for Purbachal-2 substation could not be handed over by the concerned authority and hence both the 400/230 and 230/132 kV substations will be constructed in the premises of the 400/230 kV substation, and it will be a 400/230/132 kV substation.

- ii. 400/230 kV Indoor GIS Substation: Kaliganj (Gazipur) with 2×750 MVA 400/230 kV transformer (Future 132 kV Provision).

**E. 230 kV Substation: 02 nos.**

- i. 230/132/33 kV Indoor GIS Substation: Rupsha with 3x 250/350 MVA 230/132 kV and 3x80/120 MVA 132/33 kV transformer
- ii. 230/33 kV Indoor GIS Substation: Bhola with 2x120/140 MVA 230/33 kV transformer (Future 132 kV Provision)

**F. 132 kV Substation: 10 nos.**

- i. 132/33 kV Indoor GIS Substation: Phultola with 3x80/120 MVA 132/33 kV transformer
- ii. 132/33 kV Indoor GIS Substation: Manirampur with 2x80/120 MVA 132/33 kV transformer
- iii. 132/33 kV Indoor GIS Substation: Maheshpur with 2x80/120 MVA 132/33 kV transformer
- iv. 132/33 kV Indoor GIS Substation: Meherpur with 2x80/120 MVA 132/33 kV transformer
- v. 132/33 kV Indoor GIS Substation: Domar with 2x80/120 MVA 132/33 kV transformer (Future 230 kV Provision)
- vi. 132/33 kV Indoor GIS Substation: Hatibandha with 2x80/120 MVA 132/33 kV transformer
- vii. 132/33 kV Indoor GIS Substation: Jhalokathi with 2x80/120 MVA 132/33 kV transformer
- viii. 132/33 kV Indoor GIS Substation: Pirojpur with 2x80/120 MVA 132/33 kV transformer
- ix. 132/33 kV Indoor GIS Substation: Bhanga with 3x80/120 MVA 132/33 kV transformer
- x. 132/33 kV Indoor GIS Substation: Shibchar with 3x80/120 MVA 132/33 kV transformer (Future 230 kV Provision)

**G. 132 kV Bay Extension: 20 nos.**

- i. 4 nos. 132 kV AIS Bay Extension at Satkhira Substation (Increase in bay extensions from 2nos. originally planned but there is no additional land required)
- ii. 2 nos. 132 kV AIS Bay Extension at Kaliganj Substation
- iii. 2 nos. 132 kV AIS Bay Extension at Patnitala Substation
- iv. 2 nos. 132 kV GIS Bay Extension at Niamatpur Substation (change from AIS due to lack of space)
- v. 2 nos. 132 kV AIS Bay Extension at Gopalganj Substation
- vi. 2 nos. 132 kV GIS Bay Extension at Bagerhat Substation (change from AIS due to lack of space)
- vii. 2 nos. 132 kV AIS Bay Extension at Kushtia Substation<sup>2</sup>
- viii. 2 nos. 132 kV GIS Bay Extension at Purba Sadipur Substation
- ix. 2 nos. 132 kV GIS Bay Extension at Bhandaria Substation

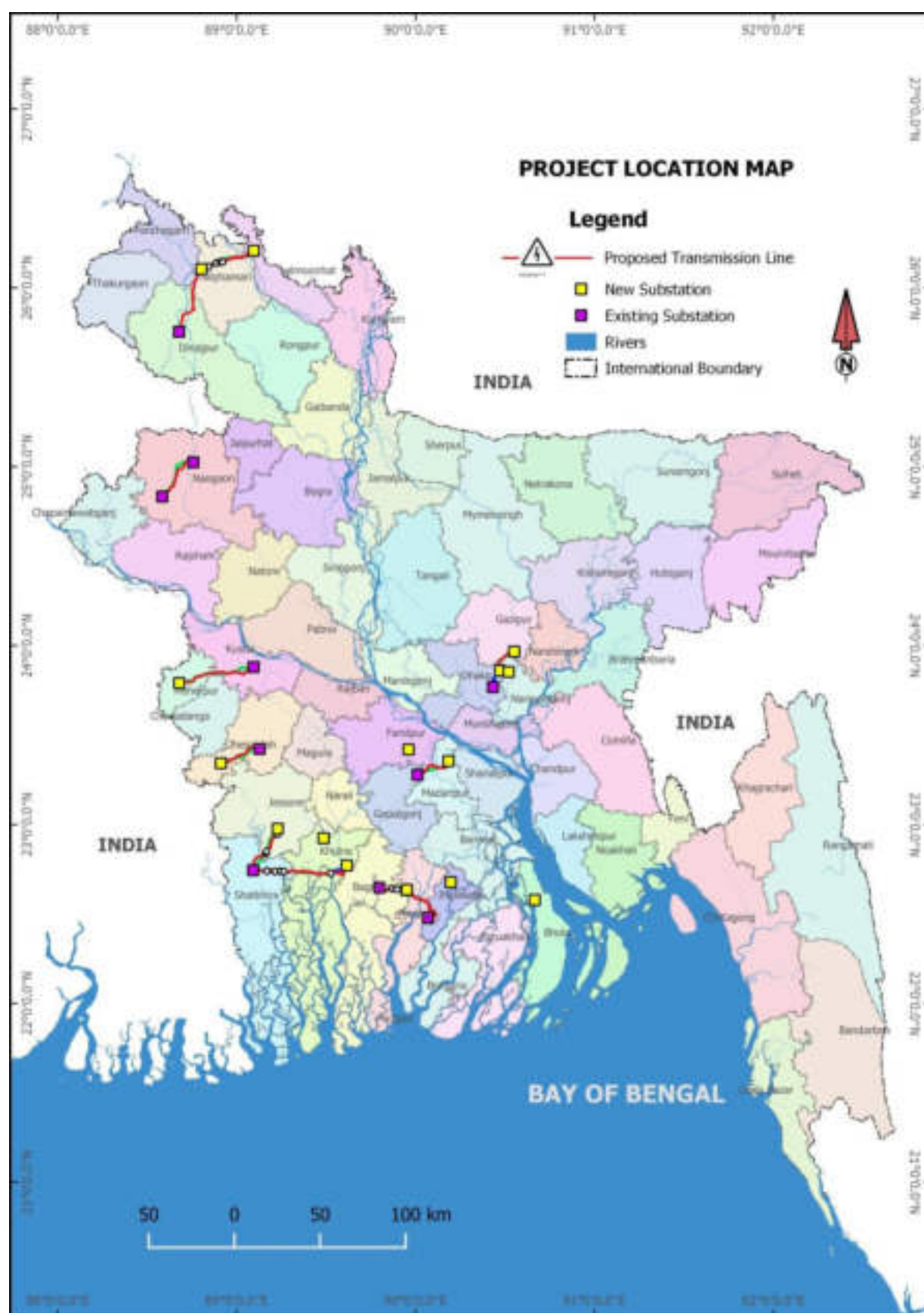
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<sup>2</sup> It was incorrectly reported in the IEE as a GIS, but it has always been planned as an AIS.

5. Geographically, the project area is spread over 42 city corporations/municipalities/sub-districts of 21 districts of 5 administrative divisions of Bangladesh which are listed below:

**Table 1-1: Project Administrative Area**

| Division | District                                                          | City Corporation/ Municipality/ Sub-District                                                                                                                                                     |
|----------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dhaka    | Dhaka, Faridpur, Madaripur, Gazipur, Narayanganj, Gopalganj       | Dhaka North City Corporation, Kaliganj, Rupganj, Bhanga, Shibchar, Madaripur Sadar, Moksedpur                                                                                                    |
| Barishal | Pirojpur, Bhola, Jhalokathi, Patuakhali                           | Bhola Sadar, Jhalokathi Sadar, Mirzaganj, Pirojpur Sadar, Rajarpur, Bhandaria                                                                                                                    |
| Khulna   | Bagerhat, Jashore, Jhenaidah, Khulna, Kushtia, Meherpur, Satkhira | Bagerhat Sadar, Fakirhat, Kachua, Rupsha, Batiaghata, Keshabpur, Manirampur, Kaliganj, Maheshpur, Dumuria, Phultola, Kushtia Sadar, Mirpur, Rajoir, Gangni, Meherpur Sadar, Satkhira Sadar, Tala |
| Rajshahi | Naogaon                                                           | Mahadebpur, Niamatpur, Patnitola                                                                                                                                                                 |
| Rangpur  | Dinajpur, Lalmonirhat, Nilphamari                                 | Birganj, Kaharule, Khanshama, Hatibandha, Dimla, Domar, Nilphamari Shadar                                                                                                                        |
| 5 (Five) | 21 (Twenty-One)                                                   | 42 (Forty-Two)                                                                                                                                                                                   |



Source: Power Grid Company of Bangladesh (Power Grid) Ltd, 2022

## 1.2 Project Implementation Status

6. Environmental Clearance Certificate from Department of Environment has been issued on 28/07/2020 which was valid till 28/7/2025 and further extension will be applied on 07 June 2025. Bid documents of each package contain SCC Clause -47 which makes the EMP part of the contract (see Annexure-4). Also, as per SCC Clause 9.8 c) of the bid documents of each package, the eligible contractor will not be allowed to start any physical work before submission and subsequent approval of CESMP (see Annexure-5). Links to approved CESMPs of packages-3, 4, 5, 6 and 7 are available as Annexure-6. Also progress status on implementation of environmental management activities shown in

**Table 1-2: At a glance of component wise project scope and present status**

| Package   | Description                                                                                                                                                                                                                                                                                                                  | Progress                                                                                                           | Construction Progress                                                                                                                                                                                                       | Expected Completion Date | Remarks on Performance                                                                                                    |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Package-1 | 400 kV and 230 kV LILO at Kaliganj & Purbachal                                                                                                                                                                                                                                                                               | Contract signed with Hanbaek Co. Ltd. on 25/09/2023.                                                               | Construction Activities have not started yet                                                                                                                                                                                | 11/05/2025               | -                                                                                                                         |
| Package-2 | Rampura- Bashundhara 132kV double circuit underground cable line: 9.5 km underground + 1.5 km overhead                                                                                                                                                                                                                       | Contract signed with JV of TBEA and TBEA Luneng on 16/10/2022. Details of this line is included in IEE Addendum-5. | HDD, making cable trench and cable laying is ongoing. Physical progress is approximately 70% as of Dec 2024.                                                                                                                | 25/06/2025               | Environmental monitoring carried out for Package 2 during reporting period and updated the monitoring result in Chapter 3 |
| Package-3 | Satkhira-Rupsha 230 kV double circuit line (initially charged at 132 kV): 62 km with 0.7 km river crossing line, LILO of Rupsha Power Plant-Khulna (S) double circuit 230 kV Line at Rupsha Substation: 0.5 km, Satkhira-Manirampur 132 kV double circuit line: 33 km, Kaliganj-Maheshpur 132 kV double circuit line: 28 km, | Contract signed with L&T, India on 09/05/2021. Now piling work and material procurement is ongoing.                | <ul style="list-style-type: none"> <li>In Satkhira-Manirampur line, piling, piling cap and erection work have completed for 111, 101 and 96 towers respectively out of 114 approved tower locations. 12.59 km of</li> </ul> | 30/04/2025               | The contractors of Package-3 did not conduct any environmental quality monitoring for the reporting                       |

| Package | Description                                                                                                                                                                                                                                                                      | Progress                                                                                                                                                                                                                                                                                                                                            | Construction Progress                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Expected Completion Date | Remarks on Performance                                                                                                                                                                                                                        |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | Kushtia-Meherpur 132 kV double circuit line: 48 km, LILO of Goalpara-Bagerhat 132 kV double circuit line at Rupsha: 3.5 km, LILO of Gopalganj-Gallamari 132 kV double circuit line at Rupsha: 0.5 km, LILO of Noapara-Khulna Central double circuit 132kV line at Phultola: 1 km | <p>IEE addendum-1 (final) submission date: 23/08/2022</p> <p>IEE addendum-2 (final) submission date: 13/10/2022</p> <p>IEE addendum-3 (final) submission date: 30/03/2023</p> <p>IEE addendum-4 (final) submission date: 13/12/2023</p> <p>IEE addendum-5 (draft) submission date: 16/07/2024</p> <p>Construction activity started: March 2022.</p> | <p>stringing has been completed out of 33.5 km as of as of 31 Dec 2024.</p> <ul style="list-style-type: none"> <li>In Satkhira-Rupsha line, piling, piling cap and erection work have completed for 163, 133 and 124 towers respectively out of 187 approved tower locations tower locations as of 31 Dec 2024.</li> <li>In Kushtia- Meherpur line, piling, piling cap and erection work have been completed for 157, 135, and 111 towers respectively out of 157 approved tower locations approved tower locations as of 31 Dec 2024.</li> <li>In Kaliganj- Maheshpur line, piling, piling cap and erection work have been completed for 88, 88 and 88 towers respectively out of 88 approved tower and 16.7 km of stringing have completed out of 26 km as of 31 Dec 2024.</li> <li>About 70% of work has completed till 31 Dec 2024.</li> </ul> |                          | <p>period. Power Grid has issued notifications to the contractor and they are obliged to complete the monitoring study within Q1-2025. Letter to the contractor for conducting Quarterly Environmental Monitoring attached to Annexure 35</p> |

| Package   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Progress                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Construction Progress                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Expected Completion Date | Remarks on Performance                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Package-4 | Purba Sadipur-Domar 230 kV double circuit transmission line (Initially Charged at 132kV): 46.5 km, Gopalganj (N)-Shibchar 230 kV double circuit line (initially charged at 132 kV): 25 km with 0.4 km river crossing line, LILO of Barishal-Bhola-Borhanuddin double circuit 230 kV Line at Bhola substation : 1 km, Niamatpur- Patnitola 132 kV double circuit line: 32.5 km, Domar-Hatibandha 132 kV double circuit line: 35 km with 850 m Teesta River Crossing, Bagerhat-Pirojpur-Bhandaria 132 kV double circuit line: 49.5 km with 1.0 km Katcha River Crossing & 300m Bhairab River Crossing, LILO of Madaripur- Faridpur 132 kV double circuit line at Bhanga: 0.5 km, LILO of Barishal-Bhandaria double circuit 132kV line at Jhalokathi: 1.5 km | <p>Contract signed with Transrail Lighting, India on 30/06/2021. Now piling work and material procurement is ongoing.</p> <p>IEE addendum-1 (draft) submission date: 18/04/2022</p> <p>IEE addendum-1 (final) submission date: 23/08/2022</p> <p>IEE addendum-2 (draft) submission date: 04/08/2022</p> <p>IEE addendum-2 (final) submission date: 13/10/2022</p> <p>IEE addendum-3 (draft) submission date: 10/10/2022</p> <p>IEE addendum-3 (final) submission date: 30/03/2023</p> <p>Construction activity started: March 2022</p> | <ul style="list-style-type: none"> <li>In Gopalganj-Shibchar line, piling, piling cap and erection work have been completed for 62, 60 and 59 towers respectively out of 64 Approved Locations as per Tower Schedule as of Dec 2024.</li> <li>In Purba Sadipur-Domar line piling, piling cap and erection work have been completed for 127,123 and 114 towers respectively out of 126 approved Location as per tower schedule .as of Dec 2024.</li> <li>In Domar - Hatibandha line, piling, piling cap and erection work have been completed for 101, 96 and 87 towers respectively out of 126 approved locations as per tower schedule as of Dec 2024.</li> <li>In the Niamatpur-Patnitola line piling, piling cap and erection work have completed for 96, 39 and 28 towers respectively out of 96 approved locations as</li> </ul> | 30/06/2025               | The contractors of Package-4 did not conduct any environmental quality monitoring for the reporting period. Power Grid has issued notifications to the contractor and they are obliged to complete the monitoring study within Q1-2025. Letter to the contractor for conducting Quarterly Environmental Monitoring attached to Annexure 35 |

| Package   | Description                                                                                                                                                                  | Progress                                                                                       | Construction Progress                                                                                                                                                                                                                                                                                                                     | Expected Completion Date | Remarks on Performance                                                                                                    |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------|
|           |                                                                                                                                                                              |                                                                                                | <p>per towers schedule.as of Dec 2024.</p> <ul style="list-style-type: none"> <li>Bagerhat-Pirojpur-Bhandaria line pile, pile cap and erection work have completed 135, 38 and 23 towers respectively out of 157 approved locations as per tower schedule.as of Dec-24.</li> <li>About 68.25% work has completed till Dec 2024</li> </ul> |                          |                                                                                                                           |
| Package-5 | 400/230 kV Indoor GIS Substation: Kaliganj (Gazipur) with 2×750 MVA 400/230 kV transformer (Future 132 kV Provision)                                                         | Contract signed with China Electric Power Equipment and Technology (CET) Co. Ltd on 03/1/2022. | About 90% Land Filling has been done at Kaliganj 400/230 kV substation as of December 2024                                                                                                                                                                                                                                                | 14/06/2025               | Environmental monitoring carried out for Package 5 during reporting period and updated the monitoring result in Chapter 3 |
| Package-6 | 400/230 kV Indoor GIS Substation: Purbachal with 3×750 MVA 400/230 kV transformer & 230/132 kV Indoor GIS Substation: Purbachal-2 with 2×350/450 MVA 230/132 kV transformer. | Contract signed with China Electric Power Equipment and Technology (CET) Co. Ltd on 03/1/2022. | Land Filling has fully completed at Purbachal 400/230/132 kV substation as of December 2024                                                                                                                                                                                                                                               | 14/06/2025               | Environmental monitoring carried out for Package 6 during reporting period and updated the                                |

| Package   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Progress                                                                                                                                                | Construction Progress                                                                                                                                                                                   | Expected Completion Date | Remarks on Performance                                                                                                                                                                                                                                                                                                                     |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                         |                                                                                                                                                                                                         |                          | monitoring result in Chapter 3                                                                                                                                                                                                                                                                                                             |
| Package-7 | 230/132/33 kV Indoor GIS Substation: Rupsha with 3x 250/350 MVA 230/132 kV and 3x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Phultola with 3x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Manirampur with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Maheshpur with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Meherpur with 2x80/120 MVA 132/33 kV transformer, Four nos. 132 kV AIS Bay Extension at Satkhira Substation, Two nos. 132 kV AIS Bay Extension at Kaliganj Substation, Two nos. 132 kV AIS Bay Extension at Bagerhat Substation & Two nos. 132 kV AIS Bay Extension at Kushtia Substation. | Contract signed with CMEC-CNEEC JV on 27/02/2022.<br><br>IEE addendum-4 (draft) submission date: 13/12/2023<br><br>Construction started in March, 2023. | Civil works at Rupsha, Phultola, Manirampur and Meherpur substations are ongoing. Land development is ongoing at Maheshpur and Satkhira.<br><br>About 25% of the work was completed till December 2024. | 30/06/2025               | The contractors of Package-7 did not conduct any environmental quality monitoring for the reporting period. Power Grid has issued notifications to the contractor and they are obliged to complete the monitoring study within Q1-2025. Letter to the contractor for conducting Quarterly Environmental Monitoring attached to Annexure 35 |

| Package    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Progress                                                       | Construction Progress                                                                       | Expected Completion Date | Remarks on Performance |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------|------------------------|
| Package-8  | 230/33 kV Indoor GIS Substation: Bhola with 2x120/140 MVA 230/33 kV transformer (Future 132 kV Provision), 132/33 kV Indoor GIS Substation: Domar with 2x80/120 MVA 132/33 kV transformer (Future 230 kV Provision), 132/33 kV Indoor GIS Substation: Hatibandha with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Shibchar with 3x80/120 MVA 132/33 kV transformer (Future 230 kV Provision), 132/33 kV Indoor GIS Substation: Bhanga with 3x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Jhalokathi with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Pirojpur with 2x80/120 MVA 132/33 kV transformer, Two nos. 132 kV AIS Bay Extension at Patnitala Substation, Two nos. 132 kV AIS Bay Extension at Niamatpur Substation, Two nos. 132 kV AIS Bay Extension at Gopalganj Substation, Two nos. 132 kV GIS Bay Extension at Purba Sadipur Substation & Two nos. 132 kV GIS Bay Extension at Bhandaria Substation. | Contract signed with Energypac-CSEPD Consortium on 23/06/2022. | The contract has been terminated and effective from 27/05/2024. Rebidding is under process. | --                       |                        |
| Package-10 | Procurement of Drones                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Contract signed on 18/01/2024                                  | Commissioned on 23/12/2024                                                                  | 31/12/2024               |                        |
| S-2        | Consultancy for Drones Legislation implementation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Contract signed on 08/10/2021                                  | -                                                                                           | 31/12/2024               |                        |

| Package | Description                                 | Progress                      | Construction Progress | Expected Completion Date | Remarks on Performance |
|---------|---------------------------------------------|-------------------------------|-----------------------|--------------------------|------------------------|
| S-3     | Consultancy for External Social Monitoring. | Contract signed on 15/03/2022 | -                     | -                        |                        |

Progress on implementation of environmental management activities and Package-wise environmental safeguards documentation status were mentioned in below table.

**Table 1-3: Progress on implementation of environmental management activities**

| Activity                                         | DWZTGEP Packages |     |     |     |     |     |     |     |
|--------------------------------------------------|------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                  | P-1              | P-2 | P-3 | P-4 | P-5 | P-6 | P-7 | P-8 |
| <b>Monitoring and Reporting</b>                  |                  |     |     |     |     |     |     |     |
| Monthly Report                                   | x                | √   | √   | √   | √   | √   | √   | N/A |
| Quarterly Report                                 | x                | √   | x   | x   | √   | √   | x   | N/A |
| Semi-annual Report                               | x                | √   | √   | √   | √   | √   | √   | N/A |
| <b>Baseline Environmental Quality Monitoring</b> |                  |     |     |     |     |     |     |     |
| Air Quality                                      | x                | √   | √   | √   | √   | √   | √   | N/A |
| Noise Level                                      | x                | √   | √   | √   | √   | √   | √   | N/A |
| Surface Water Quality                            | x                | √   | √   | √   | √   | √   | √   | N/A |
| Groundwater Quality                              | x                | √   | √   | √   | √   | √   | √   | N/A |
| Soil Quality                                     | x                | √   | √   | √   | √   | √   | √   | N/A |
| <b>Periodic Environmental Quality Monitoring</b> |                  |     |     |     |     |     |     |     |
| Air Quality                                      | X                | √   | X   | X   | √   | √   | X   | N/A |
| Noise Level                                      | X                | √   | X   | X   | √   | √   | X   | N/A |
| Surface Water Quality                            | X                | √   | X   | X   | √   | √   | X   | N/A |
| Groundwater Quality                              | X                | √   | X   | X   | √   | √   | X   | N/A |
| Soil Quality                                     | X                | √   | X   | X   | √   | √   | X   | N/A |

**Table 1-4: Package-wise environmental safeguards documentation status**

| Package | CESEMP Approved by PMU (Yes/No) | IEE/Addendum of IEE prepared (Yes/No) | Disclosed On project website (Provide weblink)                                                                                            | Remarks                                 |
|---------|---------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 1       | No                              | No                                    |                                                                                                                                           | CESMP submitted, review ongoing         |
| 2       | Yes                             | Yes                                   | <a href="https://erp.powergrid.gov.bd/w/esia_reports/show_esia_reports">https://erp.powergrid.gov.bd/w/esia_reports/show_esia_reports</a> |                                         |
| 3       | Yes                             | Yes                                   |                                                                                                                                           |                                         |
| 4       | Yes                             | Yes                                   |                                                                                                                                           |                                         |
| 5       | Yes                             | Yes                                   |                                                                                                                                           |                                         |
| 6       | Yes                             | Yes                                   |                                                                                                                                           |                                         |
| 7       | Yes                             | Yes                                   |                                                                                                                                           |                                         |
| 8       | No                              | No                                    |                                                                                                                                           | Contract terminated, retender initiated |

## 2 COMPLIANCE TO NATIONAL REGULATIONS

7. The Environment Conservation Act of 1995 establishes the requirement for an environmental assessment in Bangladesh. Any proposed "industrial unit or project" must obtain prior approval from the Department of Environment (DoE). The act has classified projects to be assessed by the DoE in four categories (Green, Yellow, Orange and Red). Electrical infrastructure projects involving transmission lines longer than 25 km are categorized as 'Red' category, which triggers an automatic requirement for an IEE. Environmental Clearance Certificate from Department of Environment has been issued on 28/07/2020 and was valid till 28/07/2025.
8. Land acquisition for substations is done in accordance with the Acquisition and Requisition of Immovable Property Act, 2017 according to which the DC of the respective district determines the compensation amount for lands to be acquired as well as trees, crops, vegetation etc. situated in that land. The Project office deposits the money to the DC who is authorized by law to distribute the compensation amount among the affected people. Under the DWZTGE Project, 79.6 acres of land in 15 places has been acquired and compensation amount for all of the acquired sites as determined by the DC has been deposited by the project office. In all cases, all the people concerned have been notified properly as per the requirements of the law and the project office has deposited the compensation amount as determined by the DC.
9. During the construction of transmission lines, losses to the vegetation and plants are inevitable. The owners concerned are compensated as per rates provided by the local agriculture office. Project office has collected the rates from the local agricultural offices. Also, the transmission lines will cross several water bodies for which permission from Bangladesh Interim Water Transport Authority (BIWTA) has been obtained.

**Table 2-1: Compliance with ECC Requirements**

| SI No | ECC Requirement                                                                                                                                                                               | Compliance Status  | Remarks                                                                                                                                                                    |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | The activity under this Project shall not result in the loss of containment of any materials that would affect health or will have a damaging impact on the environment or natural resources. | Complied           | All harmful material is being contained and disposed properly.                                                                                                             |
| 2     | Proper and adequate sanitation facilities shall be ensured in labor camps throughout the proposed Transmission Pipeline construction program.                                                 | Complied           | Proper sanitation has been ensured by the respective contractors.                                                                                                          |
| 3     | No solid waste can be burnt in the project area. An environmentally friendly solid waste management should be in place during whole the period of the project in the field.                   | Complied           | No wastage is burnt. All the waste/excess material is collected and recycled/ disposed properly.                                                                           |
| 4     | Proper and adequate on-site precautionary measures and safety measures should be ensured so that no habitat of any flora and fauna would be demolished or destructed.                         | Partially complied | No habitat of any fauna is harmed. However, there are some losses to the flora during the construction phase for which proper compensation to the owners has been ensured. |

| SI No | ECC Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Compliance Status | Remarks                                                                                   |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------|
| 5     | All the required mitigation measures suggested in the EMP report along with the emergency response plan are to be strictly implemented and kept operative/ functioning on a continuous basis.                                                                                                                                                                                                                                                                                  | Complied          | EMP is a part of the contract for every contractor and is being followed strictly.        |
| 6     | To reduce dust, spraying of water over the earthen materials should be carried out from time to time.                                                                                                                                                                                                                                                                                                                                                                          | Complied          | Water is being sprayed on stored construction material to avoid dust generation.          |
| 7     | Resettlement plan should be properly implemented, and people should be adequately compensated.                                                                                                                                                                                                                                                                                                                                                                                 | Complied          | Proper compensation has been ensured.                                                     |
| 8     | After the construction work, topsoil should be properly restored. No wetland should be filled up.                                                                                                                                                                                                                                                                                                                                                                              | Complied          | No wetland is being filled up. Topsoil has been transferred to nearby agricultural lands. |
| 9     | Construction material should be properly disposed of after the construction work is over.                                                                                                                                                                                                                                                                                                                                                                                      | Complied          | Construction waste is being properly collected and disposed.                              |
| 10    | As described in the report, environmental monitoring should be strictly followed and monitoring report should be shared with DOE to ensure the environmental management properly.                                                                                                                                                                                                                                                                                              | Complied          | The monitoring report is being shared with DoE annually during renewal of the ECC.        |
| 11    | At the time of commissioning of the Transmission line and other facilities, utmost precautionary measures should be taken to reduce the possibility of accident.                                                                                                                                                                                                                                                                                                               | Will be complied  | Public announcement will be made before electrically charging any facilities.             |
| 12    | The Environmental Management Plan (EMP) included in the EMP Report shall strictly be implemented and kept functioning on a continuous basis.                                                                                                                                                                                                                                                                                                                                   | Complied          | EMP is a part of the contract for every contractor and is being followed strictly.        |
| 13    | In case of any emergency, the following information shall immediately be reported to Headquarter of the Department of Environment (DOE) simultaneously.<br>a. Nature of incidents (fire, accident, collision, etc.)<br>b. Personnel affected (injured, missing, fatalities, etc.)<br>c. Emergency support available and its location (standby transport, medical facilities, etc.)<br>d. Weather conditions<br>e. Current operations (abandoning the site, firefighting, etc.) | Will be complied  | Will be reported in case of any emergency.                                                |

| SI No | ECC Requirement                                                                                                                                                                                                                                                                   | Compliance Status | Remarks                                                                                                                 |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------|
| 14    | All pollution incidents shall be reported immediately and simultaneously to the nearby Office of the Department of Environment.                                                                                                                                                   | Will be complied  | Will be reported in case of any incident.                                                                               |
| 15    | Full and adequate utilization of the techniques for mitigation of pollution and environmental damage as well as that for treatment of wastes shall be ensured.                                                                                                                    | Complied          | Pollution and environmental damage measures have been ensured.                                                          |
| 16    | On completion of the Transmission line and other construction. The project authority shall hand-over and leave the land to the actual landowner in a replenished condition in terms of fertility and topography.                                                                  | Will be complied  | Land will be handed over to the landowners after commissioning of transmission lines in a ready to cultivate condition. |
| 17    | All parameters of effluent, gaseous emission, noise, solid waste, hazardous waste etc. shall be within the limits in the Environment Conservation Rules (ECR), 2023. In case of non-coverage of ECR, the World Bank Environment, Health and Safety Guideline shall be adhered to. | Complied          | Adherence to the relevant standard being ensured.                                                                       |
| 18    | Rehabilitation of human settlement or compensation for any sort of activity which will incur damage or loss of public or private property, or any natural resources shall be addressed as per Government of Bangladesh rules and regulations                                      | Complied          | Govt. rules are being followed.                                                                                         |
| 19    | No activity of cutting/razing/dressing of hill or hill land is endorsed under this clearance without due permission/clearance of the concerned authority of the Government of Bangladesh.                                                                                         | Complied          | The project's geographic locations do not have any hills.                                                               |
| 20    | Appropriate permission would be required to obtain from the forest department in favor of cutting/felling of any plant/tree/sapling forested by any individual or government before doing such type of activity.                                                                  | Will be complied  | Permission will be requested whenever there is any such requirement.                                                    |
| 21    | Power Grid Company of Bangladesh Ltd (Power Grid) shall extend active cooperation to DOE officials to facilitate their visit to the site as and when necessary.                                                                                                                   | Complied          | DoE officials are always welcomed to visit sites and offices.                                                           |

## 2.1 Compliance with Environmental Covenants from the ADB Loan Agreement

10. Environment: Power Grid complies with (a) all applicable laws and regulations of ADB relating to environment, health, and safety; (b) the Environmental Safeguards; (c) all measures, and

requirements set forth in the IEE, EMP and CAP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.

11. Land Acquisition and Involuntary Resettlement: Power Grid is complying with (a) all applicable laws and regulations of the Borrower relating to land acquisition and involuntary resettlement; (b) the Involuntary Resettlement Safeguards; and (c) all measures, and requirements set forth in the RP, and any corrective or preventative actions set forth in the Safeguards Monitoring Report. Under this project, land that are only used for cultivation in the dry season are being acquired. Therefore, there is no resettlement under this project.
12. Tribes, Minor Races, Ethnic Sects and Communities: Power Grid ensures that the Project does not have any Tribes, Minor Races, Ethnic Sects and Communities Safeguards impacts.
13. Safeguards Related Provisions in Bidding Documents and Works Contracts: Bid documents of each package contains SCC Clause-47 which makes the EMP part of the contract (Annexure-4). Also, as per SCC Clause 9.8 c) of the bid documents of each and every package, the eligible contractor will not be allowed to start any physical work before submission and subsequent approval of CESMP (Annexure-5). Links to approved CESMPs of packages 2, 3, 4, 5, 6 and 7 are available in Annexure.
14. Labor Standards, Health and Safety: Power Grid has included specific provisions in the bidding documents and contracts financed by ADB under this Project requiring that the contractors, among other things: (a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (b) do not use child labor; (c) do not discriminate workers in respect of employment and occupation; (d) do not use forced labor; (e) allow freedom of association and effectively recognize the right to collective bargaining; and (f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors. These requirements are added in the bid document as SCC 22.2.7 and GCC 22.2 (Annexures 7 & 8).

**Table 2-2: Compliance to Environmental Covenants**

| Schedule #, Para. #  | Covenant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Compliance Status | Remarks                                                                                                                                           |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Schedule 4, Para. 10 | <u>Environment</u> : The borrower shall or shall cause Power Grid to ensure that the preparation, design, construction, implementation, operation, and decommissioning of the Project and all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environment, health, and safety; (b) the Environmental Safeguards; (c) all measures and requirements set forth in the IEE, EMP and CAP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report. | Being complied    | Project preparation, design, construction, implementation, operation, and decommissioning are complying with all applicable laws and regulations. |
| Schedule 4, Para. 11 | <u>Land Acquisition and Involuntary Resettlement</u> : The borrower shall or shall cause Power Grid to ensure that all rights-of-way required for the Project are made available to the Works contractor in accordance with the schedule agreed under                                                                                                                                                                                                                                                                            | Being complied    | Necessary RoW are being made available to the contractors as per work schedule following all                                                      |

| Schedule #, Para. #  | Covenant                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Compliance Status | Remarks                                                                                                                                                         |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | the related Works contract and all land acquisition and resettlement activities are implemented in compliance with (a) all applicable laws and regulations of the Borrower relating to land acquisition and involuntary resettlement; (b) the Involuntary Resettlement Safeguards; and (c) all measures and requirements set forth in the RP, and any corrective or preventative actions set forth in the Safeguards Monitoring Report.                                            |                   | applicable laws and regulations. There will be no resettlement under this project and the requirements of RP and safeguard reports are being followed properly. |
| Schedule 4, Para. 12 | Without limiting the application of the Involuntary Resettlement Safeguards or the RP, the borrower shall or shall cause Power Grid to ensure that no physical or economic displacement takes place in connection with the Project until:<br><br>(a) compensation and other entitlements have been provided to affected people in accordance with the RP; and<br><br>(b) a comprehensive income and livelihood restoration program has been established in accordance with the RP. | Being complied    | This project will not require any resettlement.                                                                                                                 |
| Schedule 4, Para. 13 | <u>Tribes, Minor Races, Ethnic Sects and Communities</u> : The borrower shall or shall cause Power Grid to ensure that the Project does not have any Tribes, Minor Races, Ethnic Sects and Communities Safeguards impacts. If the Project does have any such impact, the <u>borrower shall or shall cause</u> Power Grid to take all steps required to ensure that the Project complies with the applicable laws and regulations of the Borrower and with the SPS.                 | Being complied    | This project will not have any impact on any Tribes, Minor Races, Ethnic Sects and Communities                                                                  |
| Schedule 4, Para. 14 | Human and Financial Resources to Implement Safeguards Requirements: The borrower shall make available or cause Power Grid to make available necessary budgetary and human resources to fully implement the EMP and the CAP.                                                                                                                                                                                                                                                        | Being complied    | Both Power Grid and the contractors have human and financial resources to implement the respective responsibilities of EMP and CAP.                             |
| Schedule 4, Para. 15 | <u>Safeguards Related Provisions in Bidding Documents and Works Contracts</u> :                                                                                                                                                                                                                                                                                                                                                                                                    | Being complied    | All the provisions are included in                                                                                                                              |

| Schedule #, Para. #  | Covenant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Compliance Status | Remarks                                                                                                                                                                                  |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | <p>The borrower shall or shall cause Power Grid to ensure that all bidding documents and contracts for Works contain provisions that require contractors to:</p> <p>(a) comply with the measures relevant to the contractor set forth in the IEE, the EMP, the CAP, and the RP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set forth in a Safeguards Monitoring Report.</p> <p>(b) make available a budget for all such environmental and social measures.</p> <p>(c) provide the Borrower and Power Grid with a written notice of any unanticipated environmental, resettlement or tribes, minor races, ethnic sects and communities risk or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP and the RP.</p> <p>(d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and</p> <p>(e) reinstate pathways, other; local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.</p> |                   | bidding and contract documents.                                                                                                                                                          |
| Schedule 4, Para. 16 | <p>Safeguards Monitoring and Reporting:</p> <p>The Borrower shall do the following or shall cause Power Grid to do the following:</p> <p>(a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission.</p> <p>(b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP and the RP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Being complied    | <p>Submitting Semi Annual Safeguard Monitoring Report submitted to ADB.</p> <p>There was no unanticipated environmental and/or social risks and impacts occurred during construction</p> |

| Schedule #, Para. #  | Covenant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Compliance Status | Remarks                                                                 |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------|
|                      | <p>(c) no later than 90 days after the Effective Date, engage qualified and experienced external experts under a selection process and terms of reference acceptable to ADB, to verify information produced through the Project monitoring process, and facilitate the carrying out of any verification activities by such external experts.</p> <p>(d) report any actual or potential breach of compliance with the measures and requirements set forth in the EMP of the RP promptly after becoming aware of the breach.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                                                                         |
| Schedule 4, Para. 17 | <p><b>Prohibited List of Investments</b></p> <p>The Borrower shall and shall cause Power Grid to ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Being complied    | Loan amounts are used only for payment of approved contract components. |
| Schedule 4, Para. 18 | <p><u><b>Labor Standards, Health, and Safety:</b></u></p> <p>The Borrower shall and shall cause Power Grid to ensure that the core labor standards and the Borrower's applicable laws and regulations are complied with during project implementation. The Borrower shall cause Power Grid to include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things:</p> <p>(a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms.</p> <p>(b) do not use child labor.</p> <p>(c) do not discriminate against workers in respect of employment and occupation.</p> <p>(d) do not use forced labor.</p> <p>(e) allow freedom of association and effectively recognize the right to collective bargaining; and</p> <p>(f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to</p> | Being complied    | Appendix-7 and 8                                                        |

| Schedule #, Para. #  | Covenant                                                                                                                                                       | Compliance Status | Remarks                                                      |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------|
|                      | the employees of contractors Schedule engaged under the Project and to members of the local communities surrounding the Project area, particularly women.      |                   |                                                              |
| Schedule 4, Para. 19 | The Borrower shall cause Power Grid to strictly monitor compliance with the requirements set forth in paragraph 17 above and provide ADB with regular reports. | Being complied    | Monitoring of all relevant compliances in all project sites. |

## 2.2 Compliance with Project Administration Manual (PAM)

15. Environment (category B): The project is classified as environmental category B as it is a transmission system improvement project, which will not pass through any ecologically sensitive area and will not bring significant adverse environmental impacts that are irreversible, diverse or unprecedented. An initial environmental examination (IEE) has been prepared in accordance with ADB's Safeguard Policy Statement (2009) and GoB legislation. The project environmental impacts from overhead line, underground cable and substations have been adequately assessed and mitigation measures have been developed that are commensurate to the impacts in separate EMPs. Meaningful consultations were undertaken to reflect the opinions and views in alignment selection and impacts mitigation stages.
16. Climate Change: The climate change impact of the project is categorized as medium. Climate risk vulnerability assessment (CRVA) has been conducted and the CRVA results have been incorporated into the project design. In addition, the project contributes to climate mitigation by using high efficiency transmission lines.
17. Involuntary resettlement (category A): The substations have been carefully designed to be constructed in the lands that are used for cultivation only in the dry season. Therefore, there is no resettlement under this project. The overhead transmission lines have temporary impacts for crops and permanent impacts for trees and land under four tower legs. Underground lines will follow the right of way of existing roads without having resettlement impacts.
18. Indigenous Peoples (category C): - The project does not affect dignity, human rights, livelihood systems or culture and territories of Indigenous Peoples.
19. Gender and Social Dimensions: The project is categorized as having some gender elements. Under the PRC Fund grant for procurement of Drones, the project will directly support women's employment in the Drone Inspection Center in Power Grid. The project will also generate jobs for local communities during construction as a direct benefit. Further, contractors will carry out HIV/AIDS awareness activities for their laborers at work sites, which will be monitored by the construction supervision consultants. Power Grid will ensure that contractors adequately provide health and safety measures for the construction workers and further ensure that bidding documents include clauses on how contractors will address this, including an information and awareness raising campaign for construction workers on sexually transmitted diseases, including HIV/AIDS and human trafficking (see Annexures 7 & 8).

### Institutional Setup of Power Grid for Implementation of EMP:

20. The contract Department of Power Grid is responsible for preparing the bid document, tender invitation, bid evaluation and contract award. They have ensured the inclusion of relevant EMP clauses in the bid document of each and every package which has been reviewed and confirmed by ADB. During implementation of the project, the PIU is responsible for overall supervision, monitoring, reporting and enforcing the EMP through the implementing contractors. Setup of the

PIU is attached as Annexure-13. Power Grid's Social and Environmental Unit (ESU) will provide internal expertise support while Power Grid appointed consulting firm (EQMS Consulting Ltd.) will provide the external expertise required for the overall implementation of the EMP.

**Table 2-3: Safeguard personnel in DWZTGE**

| Project Implementing Bodies | Name                 | Designation                   | Email Address                     | Contact Number | Roles                    |
|-----------------------------|----------------------|-------------------------------|-----------------------------------|----------------|--------------------------|
| 1. Power Grid               | Md. Abul Kashem      | Project Director              | Pd.dwztgep@pgcb.gov.bd            | 01709997858    | Primary Contact Person   |
|                             | Rezwan Ahmed Khan    | Sub-Divisional Engineer       | Rezwan07.pgcb@gmail.com           | 01708465492    | Alternate Officer        |
| 2. Consultant               | Abdul Halim          | Team leader                   | abdul.halim@eqms.com.bd           | 01719708440    | Supervision and review   |
|                             | Sadman Khaled Monsur | Deputy Team Leader            | sadman.monsur@eqms.com.bd         | 01711373678    | Supervision and review   |
|                             | Mehedi Hasan         | Coordinator and Social Expert | hasan.mehedi@eqms.com.bd          | 01719216910    | Reporting and Monitoring |
|                             | Sk Abid Md Saad      | Environmental Officer         | abid.saad@eqms.com.bd             | 01884636764    | Reporting and Monitoring |
| 3. Contractors              | Faizur Rabbee        | EHS Officer (P-2)             | rabbeeFaizur@gmail.com            | 01723656048    | Primary Contact Person   |
|                             | Anoop A T            | EHS Officer (P-3)             | anoopat@Intecc.com                | 01715251106    | Primary Contact Person   |
|                             | Arnab Kumar Mitra    | Project Manager (P-4)         | arnab.mitra@transraillighting.com | 01316709382    | Primary Contact Person   |
|                             | Sohel Rana           | EHS Officer (P-5 and 6)       | sohelranaeee76@gmail.com          | 01743883846    | Primary Contact Person   |
|                             | Ge Wenbo             | Project Manager (P-7)         | gewenbo@cneec.com.cn              | 01922360325    | Primary Contact Person   |

## 2.3 Grievance Redress Mechanism

21. GRM is a locally based, project-specific way to deal with and resolve complaints and grievances faster and thus enhance project performance standards in terms of environmental, social and resettlement management. The fundamental objectives of the GRM, implemented through a Grievance Redress Committee (GRC) are to resolve any environmental and resettlement related grievances in consultation with the aggrieved party to facilitate smooth implementation of environmental and resettlement plans and establish accountability of the affected people.
22. A GRC (Annexure-7) is formed to receive and resolve complaints as well as grievances from aggrieved people from the local stakeholders including the Project-affected people. Based on consensus, the GRC will help to resolve issues/conflicts amicably and quickly, saving the aggrieved persons from having to resort to expensive, time-consuming legal actions. The procedure will, however, not prevent a person's right to go to the courts of law.
23. The established GRC will function throughout the life cycle of the project implementation and Power Grid will ensure its accessibility to affected parties and transparency and efficiency in grievance resolution. However, it will not deal with or interfere with any matters which are already placed before the country's courts of law. The Project will provide publicity for the GRC established using a variety of media such as brochures and leaflets printed in Bengali and through community level awareness raising programs.

24. Contractors of packages 2, 3, 4, 5, 6, and 7 have set up signboards/banners in every construction site which lets the people know about the ongoing activities. Complain logbooks are made available at each site. Power Grid and EQMS Ltd., the consultant, arranges regular formal/informal discussion sessions with the local mass to inform them about the GRC and know how people are feeling about the ongoing construction activities. The general vibe among the common people is very positive and they are eager to experience better-quality electricity in their area. EQMS has distributed leaflets within the vicinity of the construction areas in order to make people aware of the GRC.

As of now no issue regarding grievances has been raised to the GRC.

## **2.4 Compliance with Environmental Management Plan**

25. EMP has been prepared for the substation and transmission line subprojects. It describes the anticipated impacts, monitoring requirements, and development of mitigation measures with respect to the following stages: (i) pre-construction, (ii) construction, and (iii) operation and maintenance. Detailed, site-specific mitigation measures and monitoring plans are developed and are being implemented throughout the project implementation phase.
26. EMP for the project identifies feasible and cost-effective mitigation and remediation measures to be taken to reduce potential significant, adverse impacts to acceptable levels. Here, proper mitigation measures are proposed for each potential impact, including details of responsible parties for implementation of the mitigation measures and the associated monitoring program.
27. Environmental monitoring reports are being submitted to ADB on a semi-annual basis during construction phase, while on an annual basis during operation by Power Grid. If any of the safeguard requirements that are covenanted in the legal agreements are found not to be satisfactorily complied, an appropriate corrective action plan (CAP) will be developed and implemented as agreed upon with ADB to rectify unsatisfactory safeguard compliance.

28. EMP for substations and Transmission line are mentioned in Table 2-4 and Table 2-5.

**Table 2-4: EMP for substations**

| Item                                    | Implemented Mitigation Measures                                                       | Corrective Action Taken                                                   | Corrective Action Taken                                                               | Compliance Status | Action to be Taken                                                                    |
|-----------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------|
| Land acquisition/requisition            | No site development activities were initiated before land acquisition or requisition. | The landowner was getting paid before the land acquisition                | No site development activities were initiated before land acquisition or requisition. | Complied          | Before land acquisition, any kind of site development activities should be prohibited |
| Topsoil                                 | Secondary containers are available and used to prevent spillage on the ground.        | Chemical spills should be avoided                                         | Secondary containers are available and used to prevent spillage on the ground.        | Being Complied    | The secondary container should be used properly                                       |
| Cutting of trees/Clearing of vegetation | Tree plantation will be done after completion of construction activities              | No major trees were found on the site                                     | Tree plantation will be done after completion of construction activities              | Being Complied    | Green belt and garden will be developed in operation phase                            |
| Construction waste                      | Waste is collected by Municipal Waste collector from the site                         | Waste should be disposed in proper segregation manner                     | Waste is collected by Municipal Waste collector from the site                         | Being Complied    | Waste should be disposed in a segregation manner and removed by the proper authority  |
| Drainage congestion and flooding        | Substation FGL will be 500mm higher than the HFL.                                     | No major issues regarding drainage congestion and flooding were not found | Substation FGL will be 500mm higher than the HFL.                                     | Complied          | Surface height should be more than local and regional flood level                     |
| Noise level                             | Contractor using new machinery and carry out proper maintenance of the equipment      | Advance machineries should be used                                        | Contractor using new machinery and carry out proper maintenance of the equipment      | Being Complied    | Proper maintenance of the machineries                                                 |
| Air quality and dust                    | Vehicular movement over 20 km speed is strictly                                       | Spraying water during construction phase                                  | Vehicular movement over 20 km speed is strictly                                       | Complied          | Vehicular movement should not exceed                                                  |

| Item                             | Implemented Mitigation Measures                                                                                                                                                                                            | Corrective Action Taken                                                            | Corrective Action Taken                                                                                                                                                                                                    | Compliance Status | Action to be Taken                                                                                                                                                                                                   |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | prohibited and well maintained at the site.                                                                                                                                                                                |                                                                                    | prohibited and well maintained at the site.                                                                                                                                                                                |                   | more than 20 km per hour                                                                                                                                                                                             |
| Soil quality                     | Secondary container will be used to prevent oil spillage from machines and oil container                                                                                                                                   | Chemical and oil spillage should be avoided                                        | Secondary container will be used to prevent oil spillage from machines and oil container                                                                                                                                   | Being Complied    | To prevent the spillage of hazardous and non-hazardous materials, such as transformer oil and PCBs, retrofitting of proper impermeable bunds and secondary containers should be used under all chemical and oil drum |
| Siting of construction camps     | Proper sanitation is well maintained at labor and construction site                                                                                                                                                        | Safe drinking water, food, first aid and fire safety equipment should be available | Proper sanitation is well maintained at labor and construction site                                                                                                                                                        | Complied          | Proper sanitation should be maintained                                                                                                                                                                               |
| Traffic congestion/road accident | Proper lighting, signal flag (during traffic movement) and safety tapping (around the construction equipment and materials) are well maintained in every site where site development and construction activities initiated | Congestion can be avoided by proper distribution of traffic scheduling             | Proper lighting, signal flag (during traffic movement) and safety tapping (around the construction equipment and materials) are well maintained in every site where site development and construction activities initiated | Being Complied    | Proper lighting, signal flag and safety tapping should be used in excess road and site                                                                                                                               |
| Pollution due to Wastes          | Waste is collected by Municipal Waste collector from the site                                                                                                                                                              | All types of waste should be stored in segregated manners (Waste                   | Waste is collected by Municipal Waste collector from the site                                                                                                                                                              | Being Complied    | All types of stored waste should be removed regularly                                                                                                                                                                |

| Item                         | Implemented Mitigation Measures                                                                                                  | Corrective Action Taken                                           | Corrective Action Taken                                                                                                          | Compliance Status | Action to be Taken                                                                                                              |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------|
|                              |                                                                                                                                  | inventories are depicted in (Annexure 21)                         |                                                                                                                                  |                   |                                                                                                                                 |
| Community H&S                | Traffic movements are controlled through proper scheduling and limited speed                                                     | Regular monitoring of excess way                                  | Traffic movements are controlled through proper scheduling and limited speed                                                     | Being Complied    | Excessive Traffic movement at a time should be avoided                                                                          |
| Occupational H&S             | During pre-work briefing PPE ensured for the workers and also monitored during the work activities by HSE concern of contractors | All types of PPE should be available for workers                  | During pre-work briefing PPE ensured for the workers and also monitored during the work activities by HSE concern of contractors | Being Complied    | Using PPE should be monitored strictly in project site                                                                          |
| Physical cultural resources  |                                                                                                                                  | Not required                                                      |                                                                                                                                  | Not required      | Not required                                                                                                                    |
| Employment generation/income | Local manpower hired and trained for the certain activities.                                                                     | Privilege should be given to the local community while recruiting | Local manpower hired and trained for the certain activities.                                                                     | Being Complied    | Provide proper training to the recruited manpower.<br>Local vehicles are being hired for movement of man, machine and material. |

Table 2-5: EMP for Transmission Lines

| Item                                       | Implemented Mitigating Measures                                                    | Implemented Mitigating Measures                                                                                      | Corrective Action Taken                                                                                                                                        | Compliance Status | Action to be Taken                                                                 |
|--------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------|
| Tree felling/<br>Clearing of<br>vegetation | Owners to be properly compensated                                                  | Compensation for land requisition and clearing for vegetative are well disbursed to the owner (Annexure-8)           | The compensation to local people being handed over by the contractor which will be reimbursed by Power Grid                                                    | Being complied    | Owners to be properly compensated                                                  |
| Requisition of<br>Land                     | Landowners must be notified and properly compensated.                              |                                                                                                                      | No land is being acquired for transmission lines. For tower erection, landowners are being compensated as per law.                                             | Being complied    | Landowners must be notified and properly compensated.                              |
| Fauna (wildlife)                           | Owners to be properly compensated                                                  | -                                                                                                                    | The compensation to local people being handed over by the contractor which will be reimbursed by Power Grid                                                    | Being complied    | Owners to be properly compensated                                                  |
| Construction<br>Waste                      | To be removed from the site by the Contractor for proper disposal                  | Construction debris and other wastes (Plastic, paper, etc.) are safely removed from the site regularly (Annexure-21) | The contractor ensures generation of minimum construction debris. Whatever wastage generated, is collected, separated and removed from site by the contractor. | Being complied    | To be removed from the site by the Contractor for proper disposal                  |
| Noise level                                | Noise generation to be kept at a minimum level not to disturb the local community. | All types of construction work and vehicular movement shut down after 5 pm.                                          | All construction activities and movement of vehicles are done only in the daytime (9AM to 5PM).                                                                | Being complied    | Noise generation to be kept at a minimum level not to disturb the local community. |

| Item                                                            | Implemented Mitigating Measures                                                                                          | Implemented Mitigating Measures                                                                                             | Corrective Action Taken                                                                                                  | Compliance Status | Action to be Taken                                                                                                       |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------|
| Air quality and dust                                            | Dust generation to be kept at a minimum level to ensure air quality                                                      | Construction materials are covered properly, and frequent spraying of water are well maintained in dry season (Annexure-10) | Proper covering and spray of water to be ensured in construction sites.                                                  | Being complied    | Dust generation to be kept at a minimum level to ensure air quality                                                      |
| Soil quality                                                    | Prevention of Spillage and leakage of liquid at tower sites                                                              | Secondary containers are used to avoid oil and chemical spillage                                                            | Diesel and lubricants of generators and winching machines are captured from all dripping points                          | Being complied    | Prevention of Spillage and leakage of liquid at tower sites                                                              |
| Siting of construction camps (if needed for tower construction) | Consent from landowners is required, proper compensation to be provided and the surrounding environment to be protected. | Proper consents are taken from the owners and compensation are reimbursed to the owners.                                    | Camps are set up in empty lands and far from any water body/stream. Contractor pays rent/compensation to the landowners. | Being complied    | Consent from landowners is required, proper compensation to be provided and the surrounding environment to be protected. |
| Traffic congestion/ road accident                               | Traffic congestion to be controlled to avoid any traffic accident                                                        | Traffic movement and speed are controlled properly by the flag man                                                          | Control of traffic during movement of construction vehicles ensured.                                                     | Being complied    | Traffic congestion to be controlled to avoid any traffic accident                                                        |
| Pollution due to wastes                                         | Solid waste to be properly cleared-off.                                                                                  | Contractors remove wastes from all the site before leaving                                                                  | Contractor to have a functional waste management plan and clear-off all the wastes                                       | Being complied    | Solid waste to be properly cleared-off.                                                                                  |

| Item                           | Implemented Mitigating Measures                                                                  | Implemented Mitigating Measures                                                 | Corrective Action Taken                                                                                          | Compliance Status | Action to be Taken                                                                               |
|--------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------|
|                                |                                                                                                  |                                                                                 | immediately after completion of works.                                                                           |                   |                                                                                                  |
| Community H&S                  | Safety barriers and warning signs surrounding the tower construction sites                       | Safety signs are available at all sites (Annexure-22)                           | Safety signs should be available at all construction sites.                                                      | Being complied    | Safety barriers and warning signs surrounding the tower construction sites                       |
| Occupational Health and Safety | Health and Safety measures for the construction workers to be ensured                            | Proper PPE and Safety signs are ensured at the construction sites (Annexure-11) | Proper protective gears (PPE), caution sign and demarcation of construction sites to be ensured.                 | Being complied    | Health and Safety measures for the construction workers to be ensured                            |
| Employment generation/ income  | Employ local people, especially PAPs, for the tower construction activities as much as possible. | Local people and vehicle are being hired as much as possible                    | Local people should be employed. Also, local vehicles are being hired for movement of man, machine and material. | Being complied    | Employ local people, especially PAPs, for the tower construction activities as much as possible. |

## 2.5 Tree Plantation Status

29. In Package 2, 3, 4, 5 and 6 during the reporting period no trees have been removed as of December 2024. Although, some voluntary tree plantation initiated in Package 3 during reporting semester which are not a part of the tree plantation plan. Tree plantation for package 7 will be initiated after the construction of the substations. A comprehensive Tree Plantation Plan for Package 3 has been started and Package 2, 4, 5,6 and 7 will be incorporated after receiving the total inventory of tree species cut down from EPC contractor.

**Table 2-6: Details of compensatory tree planation program as of July- December 2024**

| Package    | Tree plantation plan (TPP) prepared (Yes/No) | No. of trees planned to cut | Trees planned to replant as per TPP | No. of trees removed (as of December 24) | Trees planted (as of December 24) | Types of species planted | Plantation completion status | Survival status | Remarks |
|------------|----------------------------------------------|-----------------------------|-------------------------------------|------------------------------------------|-----------------------------------|--------------------------|------------------------------|-----------------|---------|
| Package- 1 | NA                                           | NA                          | NA                                  | NA                                       | NA                                | NA                       | NA                           | NA              |         |
| Package-2  | NA                                           | NA                          | NA                                  | NA                                       | NA                                | NA                       | NA                           | NA              |         |
| Package-3  | NA                                           | 4952                        | NA                                  | NA                                       | 500                               | 5                        | NA                           | NA              |         |
| Package-4  | NA                                           | 21386                       | NA                                  | NA                                       | NA                                | NA                       | NA                           | NA              |         |
| Package-5  | NA                                           | NA                          | NA                                  | NA                                       | NA                                | NA                       | NA                           | NA              |         |
| Package-6  | NA                                           | NA                          | NA                                  | NA                                       | NA                                | NA                       | NA                           | NA              |         |
| Package-7  | NA                                           | NA                          | NA                                  | NA                                       | NA                                | NA                       | NA                           | NA              |         |
| Package-8  | NA                                           | NA                          | NA                                  | NA                                       | NA                                | NA                       | NA                           | NA              |         |

### 3 ENVIRONMENTAL QUALITY MONITORING

#### 3.1 Air Quality

30. This section identifies the status of the ambient air quality in the Rampura- Bashundhara 132kV Underground Cable Line (Package 2), 400/230 kV GIS Substation at Kaliganj, Gazipur and 400/230/132 KV GIS Substation at Purbachal. In these areas, ambient air quality is dependent on many factors like air movement, traffic volume, congestion, emissions from motor vehicles, and suspended dust particles. A continuous monitoring scheme is essential to evaluate air quality and for the development of any plan for mitigation of health risks caused by polluted air. The "criteria pollutants," particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>), CO, SO<sub>2</sub> and NO<sub>x</sub> must be monitored. Hence, to establish the baseline air quality, as per the monitoring plan, a primary analysis of air quality is proposed, before commencing the construction activities of subprojects.

##### 3.1.1 Air Quality Monitoring Locations

31. Air quality monitoring samples has been monitored for a defined time interval and from different sampling points within project areas (Table 3-1) of Package 2 alignment locations. Air quality analysis results are shown in Table 3-2. Monitoring photos are shown in Appendix 33.

**Table 3-1: Air Quality Measurement Locations and Descriptions**

| SL No                                             | Sample ID | GPS Coordinate                 | Location Details                                         | Date & Time               |
|---------------------------------------------------|-----------|--------------------------------|----------------------------------------------------------|---------------------------|
| Package 2                                         |           |                                |                                                          |                           |
| Rampura- Bashundhara 132kV Underground Cable Line |           |                                |                                                          |                           |
| 1.                                                | AQ1       | 23.81644N<br>90.43622E         | Near the Substation Area in Bashundhara Residential Area | 22.10.2024-<br>23.10.2024 |
| 2.                                                | AQ2       | 23.79979N<br>90.44887E         | Near United International University (UIU) Mosque        |                           |
| 3.                                                | AQ3       | 23.76667N<br>90.43124E         | Near the Substation Area of Aftabnagar                   |                           |
| Package 5                                         |           |                                |                                                          |                           |
| 400/230 kV GIS Substation at Kaliganj, Gazipur    |           |                                |                                                          |                           |
| 4.                                                | AQ4       | 23.968956 N<br>90.549117 E     | In front of Hafej Sheikh's House                         | 22.10.2024                |
| Package 6                                         |           |                                |                                                          |                           |
| 400/230/132 KV GIS Substation at Purbachal        |           |                                |                                                          |                           |
| 5.                                                | AQ11      | 23°47'28.07"N<br>88°40'46.51"E | In front of Mohadev Karmakar's house                     | 21.10 2024                |

Source: Quarterly Environmental Baseline Monitoring Report- November 2024 (Package 2, Package 5 and Package 6)

##### 3.1.2 Analysis Results

32. Air quality data was measured automatically every one minute and directly recorded onsite for measured parameters (SPM, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub> and CO). Different analysis methods, such as Particulates 90° Infrared Light Scattering for particulate matters (SPM, PM<sub>10</sub>, PM<sub>2.5</sub>), electrochemical sensors for toxic gases (NO<sub>x</sub>, SO<sub>2</sub>, O<sub>3</sub>, and CO) and Atomic Absorption Spectroscopy (AAS) for Lead (Pb) are integrated in the device. Monitoring photographs and lab sheets are attached in Annexure 32 and Annexure 33.

33. As per the national standard of ambient air quality CO was monitored for 8 hours to compare with the national standard. For Particulate Matter (SPM, PM10, and PM2.5), gaseous pollutants (NOx, CO, O<sub>3</sub> and SO<sub>2</sub>) and Pb, the standard duration is 24 hours. Analysis results summary of every location is briefly mentioned in the following Figure 3-1 and Table 3-2.
34. In Package 2 location, it has been spotted that all the parameters were found below the Bangladesh standard. Moreover, PM2.5 (AQ1 and AQ3) and PM10 (AQ3) crossed the IFC standard value.
35. In Package 5 and 6 locations, all the parameters were found below the Bangladesh standard. Although, PM2.5 and PM10 of package 5 and 6 locations crossed the IFC standard value.

**Figure 3-1: Air Quality Analysis Results in Package 2, 5 and 6 alignment locations**

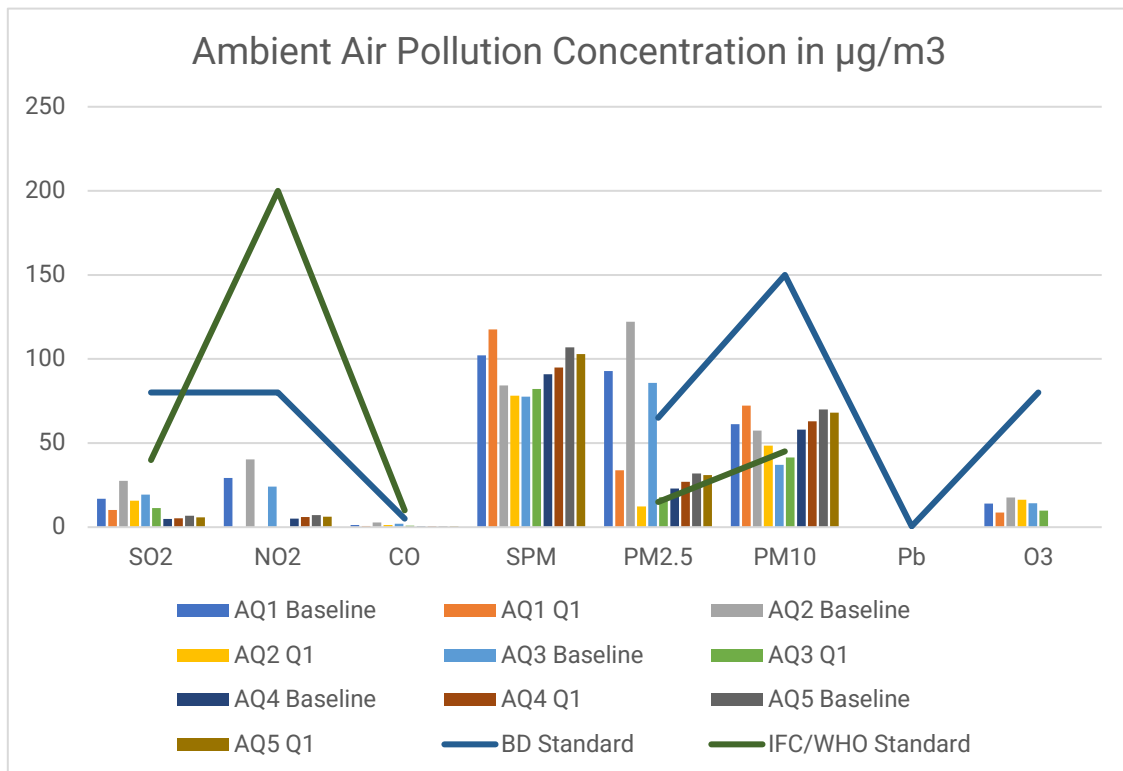


**Table 3-2: Air Quality Analysis Results in Package 2, 5 and 6 alignment locations**

| Sl. No.                                           | Code | Period   | Ambient Air Pollution Concentration in µg/m3 |                 |        |        |                   |                  |         |                |
|---------------------------------------------------|------|----------|----------------------------------------------|-----------------|--------|--------|-------------------|------------------|---------|----------------|
|                                                   |      |          | SO <sub>2</sub>                              | NO <sub>2</sub> | CO     | SPM    | PM <sub>2.5</sub> | PM <sub>10</sub> | Pb      | O <sub>3</sub> |
| Package 2                                         |      |          |                                              |                 |        |        |                   |                  |         |                |
| Rampura- Bashundhara 132kV Underground Cable Line |      |          |                                              |                 |        |        |                   |                  |         |                |
| 1.                                                | AQ1  | Baseline | 16.82                                        | 29.24           | 1.31   | 102.19 | 92.8              | 61.23            | BDL     | 13.93          |
|                                                   |      | Q1       | 10.13                                        | -               | 0.67   | 117.63 | 33.83             | 72.28            | BDL     | 8.73           |
| 2.                                                | AQ2  | Baseline | 27.49                                        | 40.23           | 2.86   | 84.25  | 122.1             | 57.43            | BDL     | 17.56          |
|                                                   |      | Q1       | 15.82                                        | -               | 1.22   | 78.27  | 12.38             | 48.43            | BDL     | 16.38          |
| 3.                                                | AQ3  | Baseline | 19.26                                        | 24.17           | 2.01   | 77.63  | 85.8              | 37.14            | BDL     | 14.21          |
|                                                   |      | Q1       | 11.39                                        | -               | 0.92   | 82.19  | 17.83             | 41.39            | BDL     | 9.83           |
| Package 5                                         |      |          |                                              |                 |        |        |                   |                  |         |                |
| 400/230 kV GIS Substation at Kaliganj, Gazipur    |      |          |                                              |                 |        |        |                   |                  |         |                |
| 4.                                                | AQ4  | Baseline | 4.9                                          | 5.1             | 0.46   | 91     | 23                | 58               | BDL     |                |
|                                                   |      | Q1       | 5.3                                          | 6               | 0.51   | 95     | 27                | 63               | BDL     |                |
| Package 6                                         |      |          |                                              |                 |        |        |                   |                  |         |                |
| 400/230/132 KV GIS Substation at Purbachal        |      |          |                                              |                 |        |        |                   |                  |         |                |
| 5.                                                | AQ5  | Baseline | 6.7                                          | 7.2             | 0.59   | 107    | 32                | 70               | BDL     |                |
|                                                   |      | Q1       | 5.9                                          | 6.3             | 0.48   | 103    | 31                | 68               | BDL     |                |
| Bangladesh Standard <sup>3</sup>                  |      |          | 80                                           | 80              | 5      | -      | 65                | 150              | 0.5     | 80             |
| **IFC/WHO Standard <sup>4</sup>                   |      |          | 40                                           | 200             | 10     | NA     | 15                | 45               | NA      | 40             |
| Duration (Hours)                                  |      |          | 24 Hour                                      | 24 Hour         | 8 Hour | -      | 24 Hour           | 24 Hour          | 24 Hour | 24 Hour        |

Source: Quarterly Environmental Baseline Monitoring Report- November 2024 (Package 2, Package 5 and Package 6)

Note: BDL= Below Detection Limit, NA= Not available

<sup>3</sup> Air Pollution (Control) Rules, 2022, Schedule 1: Ambient Air Quality Standards<sup>4</sup> WHO Ambient Air Quality Guideline Values (2005 and 2000), which are also being referred in the World Bank and IFC's General EHS Guidelines (2007). BDL-Below Detection level

## 3.2 Noise Level Quality

### 3.2.1 Noise Level Monitoring Methods

36. This section identifies the status of the ambient noise level in Package 2, 5 and 6 alignment locations. The ambient noise level has been measured within the project area for 24 hours in every location. One Noise data logger sound level meter (Techoplus, Model: SLM25K) has been used to collect the ambient noise levels. After getting all the noise data it has been downloaded to a computer. The noise meter has been settled in a tripod and kept 2-3 m away from the sources. The only sensitive areas have been covered. The noise level has been analyzed according to the methodology and compared with the Noise Pollution (Control) Rules, 2006- Schedule 1. The SLM (sound level meter) has been oriented towards the facility of interest for each measurement taken. The SLM was calibrated before the noise monitoring survey was carried out. The sound level has been recorded in form of A-weighted equivalent continuous sound pressure level ( $L_{Aeq}$ ) values with the use of A-weighting filters in the noise measuring instrument.

**Table 3-3: Noise Level Standards/ Guidelines**

| Sl. No. | Category of Area/Receptor | Bangladesh Standard <sup>5</sup> |                              | IFC-WHO <sup>6</sup>        |                               |
|---------|---------------------------|----------------------------------|------------------------------|-----------------------------|-------------------------------|
|         |                           | Day [dB(A)]<br>6 AM – 9 PM       | Night [dB(A)]<br>9 PM – 6 AM | Day [dB(A)]<br>7 AM – 10 PM | Night [dB(A)]<br>10 PM – 7 AM |
| 1.      | Silent Zone               | 50                               | 40                           | 55                          | 45                            |
| 2.      | Residential Area          | 55                               | 45                           | 55                          | 45                            |
| 3.      | Mixed Area                | 60                               | 50                           | -                           | -                             |
| 4.      | Commercial Area           | 70                               | 60                           | 70                          | 70                            |
| 5.      | Industrial Area           | 75                               | 70                           | 70                          | 70                            |

Note: The daytime is considered from 6 a.m. to 9 p.m. and the nighttime is from 9 p.m. to 6 a.m.

37. Area within 100 meters of hospital or education institution or government designated / to be designated/ specific institution/ establishment are considered Silent Zone. Use of motor vehicle horns or other signals and loudspeakers are forbidden in Silent Zone.

### 3.2.2 Noise Level Monitoring Locations

38. Noise levels were recorded in the form of sound pressure levels using a digital sound level meter. Detail list of noise level sampling location is given in **Table 3-4**.

39. **Table 3-4**. Noise level was measured at every location at different times. The sound level is recorded in form of A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ) values with the use of A-weighting filters in the noise measuring instrument.

**Table 3-4: Sensitive Noise Locations and Descriptions of Package 2, 5 and 6 locations**

| Sl. No.                                                  | Code | Location | GPS Coordinates | Sampling Date | Category |
|----------------------------------------------------------|------|----------|-----------------|---------------|----------|
| <b>Package 2</b>                                         |      |          |                 |               |          |
| <b>Rampura- Bashundhara 132kV Underground Cable Line</b> |      |          |                 |               |          |

<sup>5</sup> Noise Pollution (Control) Rules, 2006- Schedule 1

<sup>6</sup> Guidelines for Community Noise, World Health Organization (WHO), 1999; As per IFC EHS noise level guidelines,

| Sl. No. | Code | Location                                                 | GPS Coordinates                 | Sampling Date             | Category    |
|---------|------|----------------------------------------------------------|---------------------------------|---------------------------|-------------|
| 1.      | NL-1 | Near the Substation Area in Bashundhara Residential area | 22°46'58.26"N<br>89° 5'34.31"E  | 22.10.2024-<br>23.10.2024 | Mixed Area  |
| 2.      | NL-2 | Near United International University (UIU) Mosque        | 22°57'43.38"N<br>89°13'48.10"E  |                           | Silent Area |
| 3.      | NL-3 | Near the Substation Area of Aftabnagar                   | 22°45'16.79"N<br>89° 6'35.28"E  |                           | Mixed Area  |
| 4.      | NL-4 | Near United International University (UIU)               | 22°44'7.26"N<br>89°17'42.39"E   |                           | Mixed Area  |
| 5.      | NL-5 | Near Base Camp Area                                      | 22°45'29.16"N<br>89°36'22.54"E  |                           | Mixed Area  |
| 6.      | NL-6 | Near Aftabnagar                                          | 22°34'51.96"N<br>90° 1'23.77" E |                           | Mixed Area  |
| 7.      | NL-7 | Near Hospital in Aftabnagar                              | 22°34'54.01"N<br>90° 1'15.15"E  |                           | Silent Area |

#### Package 5

#### 400/230 kV GIS Substation at Kaliganj, Gazipur

|    |      |                                  |                            |            |                  |
|----|------|----------------------------------|----------------------------|------------|------------------|
| 8. | NL-8 | In front of Hafej Sheikh's House | 23.968853 N<br>90.549165 E | 22.10.2024 | Residential Area |
|----|------|----------------------------------|----------------------------|------------|------------------|

#### Package 6

#### 400/230/132 KV GIS Substation at Purbachal

|    |      |                                      |                           |            |            |
|----|------|--------------------------------------|---------------------------|------------|------------|
| 9. | NL-9 | In front of Mohadev Karmakar's house | 23.867743N<br>90.476149 E | 21.10.2024 | Mixed Area |
|----|------|--------------------------------------|---------------------------|------------|------------|

Source: Quarterly Environmental Baseline Monitoring Report- November 2024 (Package 2, Package 5 and Package 6)

### 3.2.3 Analysis Results

1. An electronic and auto-recorded noise meter has been used to conduct the study. The recorded noise levels summary monitoring results are shown in Figure 3-2 and **Error! Reference source not found..**
2. Noise level of all locations was found lower than the standard value of Noise Pollution (Control) Rules, 2006 and IFC Standard.
3. Monitoring photographs and lab sheets are attached in Annexure 32 and Annexure 33.

**Figure 3-2: Noise Monitoring Level of Package 2, 5 and 6 locations**

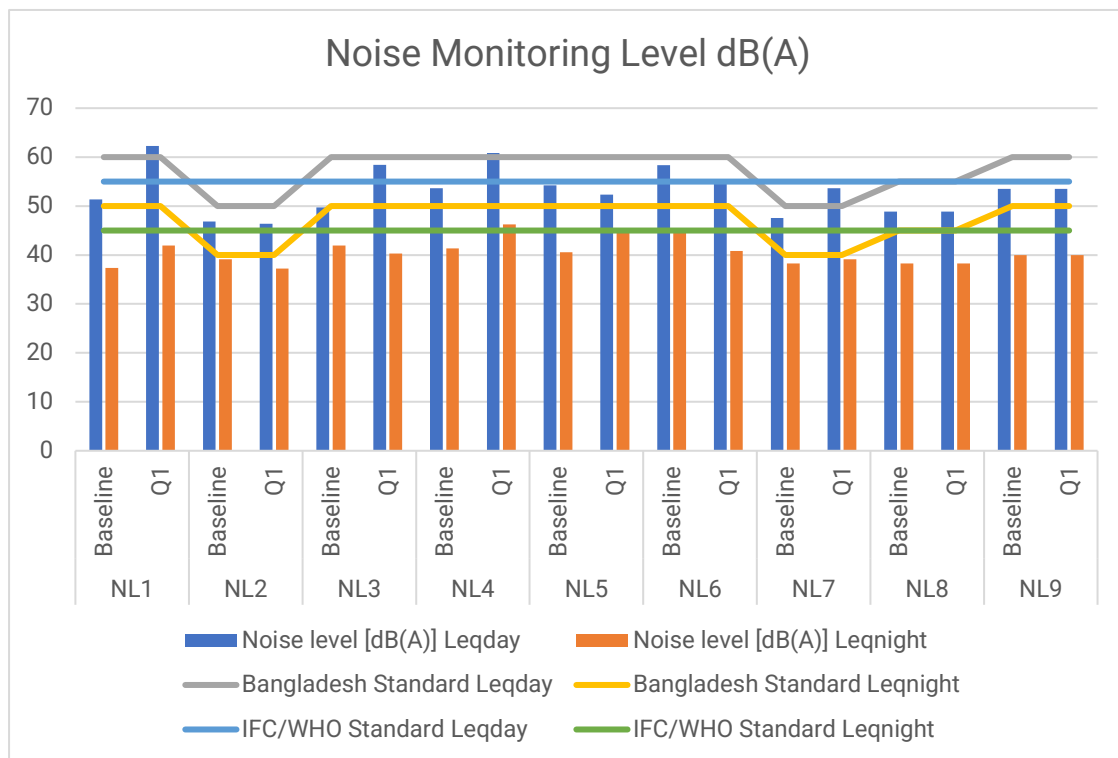


**Table 3-5: Noise Monitoring Level of Package 2, 5 and 6 locations**

| Sl. No                                            | Code | Period   | Noise level [dB(A)] |                      | Bangladesh Standard <sup>7</sup> |                      | IFC/WHO Standard <sup>8</sup> |                      | Category of Area |
|---------------------------------------------------|------|----------|---------------------|----------------------|----------------------------------|----------------------|-------------------------------|----------------------|------------------|
|                                                   |      |          | Leq <sub>day</sub>  | Leq <sub>night</sub> | Leq <sub>day</sub>               | Leq <sub>night</sub> | Leq <sub>day</sub>            | Leq <sub>night</sub> |                  |
| Package 2                                         |      |          |                     |                      |                                  |                      |                               |                      |                  |
| Rampura- Bashundhara 132kV Underground Cable Line |      |          |                     |                      |                                  |                      |                               |                      |                  |
| 1.                                                | NL1  | Baseline | 51.38               | 37.34                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
|                                                   |      | Q1       | 62.28               | 41.93                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
| 2.                                                | NL2  | Baseline | 46.82               | 39.13                | 50                               | 40                   | 55                            | 45                   | Silent Area      |
|                                                   |      | Q1       | 46.39               | 37.22                | 50                               | 40                   | 55                            | 45                   | Silent Area      |
| 3.                                                | NL3  | Baseline | 49.73               | 41.92                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
|                                                   |      | Q1       | 58.45               | 40.29                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
| 4.                                                | NL4  | Baseline | 53.62               | 41.34                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
|                                                   |      | Q1       | 60.86               | 46.25                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
| 5.                                                | NL5  | Baseline | 54.25               | 40.57                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
|                                                   |      | Q1       | 52.34               | 45.39                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
| 6.                                                | NL6  | Baseline | 58.35               | 45.39                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
|                                                   |      | Q1       | 55.39               | 40.82                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
| 7.                                                | NL7  | Baseline | 47.56               | 38.25                | 50                               | 40                   | 55                            | 45                   | Silent Area      |
|                                                   |      | Q1       | 53.62               | 39.11                | 50                               | 40                   | 55                            | 45                   | Silent Area      |
| Package 5                                         |      |          |                     |                      |                                  |                      |                               |                      |                  |
| 400/230 kV GIS Substation at Kaliganj, Gazipur    |      |          |                     |                      |                                  |                      |                               |                      |                  |
| 8.                                                | NL8  | Baseline | 48.9                | 38.3                 | 55                               | 45                   | 55                            | 45                   | Residential Area |
|                                                   |      | Q1       | 48.9                | 38.3                 | 55                               | 45                   | 55                            | 45                   | Residential Area |
| Package 6                                         |      |          |                     |                      |                                  |                      |                               |                      |                  |
| 400/230/132 KV GIS Substation at Purbachal        |      |          |                     |                      |                                  |                      |                               |                      |                  |
| 9.                                                | NL9  | Baseline | 53.52               | 39.95                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |
|                                                   |      | Q1       | 53.52               | 39.95                | 60                               | 50                   | 55                            | 45                   | Mixed Area       |

Source: Quarterly Environmental Baseline Monitoring Report- November 2024 (Package 2, Package 5 and Package 6)

<sup>7</sup> Noise Pollution (Control) Rules, 2006, Schedule 1: Area-wise Noise Standards.

<sup>8</sup> Guidelines for Community Noise, World Health Organization (WHO), 1999; As per IFC EHS noise level guidelines

### 3.3 Water Quality

#### 3.3.1 Surface Water

##### 3.3.1.1 Surface Water Sampling Methods

40. To determine the quality of surface water, a sample was collected from the nearest water body of the existing project site and analyzed in the lab for different parameters following the standard method. Change of any parameters of water due to construction can affect crops, flora, and fauna.
41. The samples have been analyzed for parameters covering bacteriological and physio-chemical characteristics which include certain heavy metals and trace elements. Samples were collected from the center of the water body approximately 0.5 m below the water surface, following standard procedures for container preparation, and sample collection, storage and preservation. During surface water collection USEPA surface water sampling guideline (<https://www.epa.gov/quality/surface-water-sampling>) was followed.
42. Water samples were collected as grab samples in a pre-washed 5-litre plastic can and a 1-litre sterilized clean PET bottle for complete Physico- chemical tests respectively. Samples were labeled properly. After that, the samples were submitted to the laboratories (DPHE and BEETLSL) for analysis of parameters. After analysis, surface water results have been compared with the national standards [ECR-2023, Schedule-2A].
43. The quality of surface water was compared with the standards for Inland Surface Water, Environment Conservation Rules (ECR) 2023-Schedule 2(A) whereas the groundwater was compared with the Drinking Water Standard ECR 2023 Schedule-2(B). The standards have been presented along with the monitoring results of surface water for comparison.

##### 3.3.1.2 Surface Water Sampling Locations

44. Samples were collected from the center of the water body approximately 0.5m below the water surface. Location of sample collection are presented in (Table 3-6). The analyzed results for surface water were compared to Bangladesh Standards (ECR, 2023) Guidelines. Results of inland surface water analysis are presented in Table 3-7 and **Error! Reference source not found..**

**Table 3-6: Surface Water Sampling Location Package 2, 5 and 6 locations**

| Sl. No.                                           | Code | Sampling Location                   | GPS Coordinate           | Type of Source | Sampling Date |
|---------------------------------------------------|------|-------------------------------------|--------------------------|----------------|---------------|
| Package 2                                         |      |                                     |                          |                |               |
| Rampura- Bashundhara 132kV Underground Cable Line |      |                                     |                          |                |               |
| 1.                                                | SW-1 | Canal, Near Bashundhara L Block     | 23.81481N<br>90.43594E   | Canal          | 22.10.2024    |
| 2.                                                | SW-2 | Canal, Near UIU                     | 23.80095N<br>90.44898E   | Canal          |               |
| 3.                                                | SW-3 | Canal, Near Aftabnagar Steel Bridge | 23.76581N<br>90.43807E   | Canal          |               |
| Package 5                                         |      |                                     |                          |                |               |
| 400/230 kV GIS Substation at Kaliganj, Gazipur    |      |                                     |                          |                |               |
| 4.                                                | SW-4 | Nolir Khal                          | 23.966951N<br>90.552715E | Canal          | 23.10.2024    |
| Package 6                                         |      |                                     |                          |                |               |
| 400/230/132 KV GIS Substation at Purbachal        |      |                                     |                          |                |               |

| Sl. No. | Code | Sampling Location | GPS Coordinate             | Type of Source | Sampling Date |
|---------|------|-------------------|----------------------------|----------------|---------------|
| 5.      | SW-5 | Tongi Khal        | 23.863404 N<br>90.474864 E | Canal          | 22.10.2024    |

Source: Quarterly Environmental Baseline Monitoring Report- November 2024 (Package 2, Package 5 and Package 6)

### 3.3.1.3 Result Analysis

45. The results analyzed for surface water were compared to the Environment Conservation Rules (ECR) 2023, Schedule 2(A). Results of inland surface water analysis are presented in Table 3-7. Monitoring photographs and lab sheet are attached to Annexure 32 and Annexure 33.
46. BOD, COD, and DO concentration of Package 2 monitoring locations were found higher than the standard value. Whereas all monitoring parameters concentration except BOD of Package 5 and 6 monitoring locations were found within the limit of the standard value.

**Table 3-7: Surface Water Analysis Result of Package 2, 5 and 6 locations**

| SI No                                             | Code | Period   | Parameters Concentration |           |      |                |           |         |       |           |                |      |      |       |      |
|---------------------------------------------------|------|----------|--------------------------|-----------|------|----------------|-----------|---------|-------|-----------|----------------|------|------|-------|------|
|                                                   |      |          | NH <sub>3</sub>          | BOD       | COD  | Total Coliform | DO        | pH      | TDS   | Turbidity | Oil and Grease | PO4  | TSS  | NH3-N | TPH  |
|                                                   |      |          | mg/L                     | mg/L      | mg/L | µS/cm          | --        | ppt     | °C    | mg/L      | mg/L           | mg/L | mg/L | mg/L  | mg/L |
| Package 2                                         |      |          |                          |           |      |                |           |         |       |           |                |      |      |       |      |
| Rampura- Bashundhara 132kV Underground Cable Line |      |          |                          |           |      |                |           |         |       |           |                |      |      |       |      |
| 1                                                 | SW1  | Baseline | 0.3                      | 29        | 124  | 96             | 3.16      | 7       | 445   | 18.7      | 2.7            |      | 6    |       |      |
|                                                   |      | Q1       | 0.19                     | 17        | 72   | 107            | 4.8       | 6.6     | 488   | 8.5       | 2.6            | 0.77 | 4    | 0.12  | <2.0 |
| 2                                                 | SW2  | Baseline | 0.26                     | 32        | 144  | 48             | 2.8       | 7.1     | 370   | 23.5      | 3.1            |      | 7    |       |      |
|                                                   |      | Q1       | 0.26                     | 21        | 88   | 119            | 3.8       | 6.4     | 429   | 10.7      | 2.3            | 0.71 | 5    | 0.22  | <2.0 |
| 3                                                 | SW3  | Baseline | 0.32                     | 40        | 176  | 64             | 2.45      | 7.1     | 476   | 10.8      | 2.9            |      | 4    |       |      |
|                                                   |      | Q1       | 0.23                     | 19        | 91   | 142            | 2.2       | 6.5     | 472   | 10.1      | 2              | 0.65 | 2    | 0.17  | <2.0 |
| Package 5                                         |      |          |                          |           |      |                |           |         |       |           |                |      |      |       |      |
| 400/230 kV GIS Substation at Kaliganj, Gazipur    |      |          |                          |           |      |                |           |         |       |           |                |      |      |       |      |
| 4                                                 | SW4  | Baseline | 0.21                     | 6         | 19   | 15             | 5.52      | 7.1     | 51    | 10.8      | 0.39           |      | 3    |       |      |
|                                                   |      | Q1       | 0.24                     | 6         | 17   | 17             | 5.48      | 7.1     | 54    | 11.2      | 0.41           | -    | 4    | -     | -    |
| Package 6                                         |      |          |                          |           |      |                |           |         |       |           |                |      |      |       |      |
| 400/230/132 KV GIS Substation at Purbachal        |      |          |                          |           |      |                |           |         |       |           |                |      |      |       |      |
| 5                                                 | SW5  | Baseline | 0.31                     | 9         | 23   | 27             | 5.11      | 6.9     | 67    | 17.1      | 0.53           |      | 7    |       |      |
|                                                   |      | Q1       | 0.24                     | 8         | 19   | 21             | 5.21      | 7.2     | 61    | 12.3      | 0.49           | -    | 4    | -     | -    |
| Bangladesh Standard <sup>9</sup>                  |      | a        | -                        | ≤3        | 25   | ≤5,000         | ≥5        | 6.5-9   | 1,000 | -         | -              | 0.5  | -    |       |      |
|                                                   |      | b        | -                        | 6 or less | 50   | -              | 5 or more | 6.5-8.5 | 1,000 | -         | -              | 2    | -    |       |      |

Source: Quarterly Environmental Baseline Monitoring Report- November 2024 (Package 2, Package 5 and Package 6).

a. Water usable for fisheries

b. Water usable for irrigation

Primary data Source: Department of Public Health &amp; Engineering (DPHE) &amp; Bangladesh Environmental Engineering Training &amp; Lab Services Ltd. (BEETLSL) Laboratory, November 2024

<sup>9</sup> The Environment Conservation Rules (ECR) 2023, Schedule 2-A (1) Standard for Inland Surface Water (a-f)

### 3.3.2 Ground Water

#### 3.3.2.1 Ground Water Sampling Methods

47. To determine the quality of ground water, samples were collected from the deep tube well of the study area and analyzed in the lab for different parameters following the standard method. Change of any parameters of water due to construction can affect the crops, flora, and fauna.
48. Ground water samples has been collected from the Ground water supply point or deep tube well or shallow tube well set up in the construction area. Ground water samples has been collected in a standard sampling bottle and 250 ml sterilized clean PET bottle for complete physio-chemical and bacteriological tests respectively. The samples have been analysed as per standard procedure/method given in Standard Method for Examination of Water and Wastewater Edition 20, published by APHA as well as using a site field test kit. Ground-Water Sampling Locations
49. Ground water samples were collected for determining the quality of existing sources. Ground water in the project area was selected as the source of groundwater. Detail of the sampling location is provided in Table 3-8.

**Table 3-8: Locations and Descriptions of Ground-Water Sampling of Package 2, 5 and 6 locations**

| Sl. No.                                           | Code | Sampling Location                                                  | GPS Coordinate             | Type of Source | Sampling Date |
|---------------------------------------------------|------|--------------------------------------------------------------------|----------------------------|----------------|---------------|
| Package 2                                         |      |                                                                    |                            |                |               |
| Rampura- Bashundhara 132kV Underground Cable Line |      |                                                                    |                            |                |               |
| 1.                                                | GW1  | Hospital, Near the Substation Area in Bashundhara Residential Area | 23.81656N<br>90.43605E     | Tube-Well      | 22.10.2024    |
| 2.                                                | GW2  | Mosque, Near United International University                       | 23.80374N<br>90.44242E     |                |               |
| 3.                                                | GW3  | Mosque, Near the Substation Area                                   | 23.76747N<br>90.42981E     |                |               |
| Package 5                                         |      |                                                                    |                            |                |               |
| 400/230 kV GIS Substation at Kaliganj, Gazipur    |      |                                                                    |                            |                |               |
| 4.                                                | GW4  | Hafej Sheikh's House                                               | 23.968512N<br>90.548888E   | Tube-Well      | 23.10. 2024   |
| Package 6                                         |      |                                                                    |                            |                |               |
| 400/230/132 KV GIS Substation at Purbachal        |      |                                                                    |                            |                |               |
| 5.                                                | GW5  | Beside Mohadev Karmakar's house                                    | 23.868053 N<br>90.476480 E | Tube-Well      | 22.10.2024    |

Source: Quarterly Environmental Baseline Monitoring Report- November 2024 (Package 2, Package 5 and Package 6).

\*\*Monitoring dates and locations obtained from the Environmental Monitoring reports of the 3rd Party monitoring consultants appointed by EPC Contractors for the respective packages.

#### 3.3.2.2 Ground-Water Quality Analysis Results

50. Analysis results of the Ground water are represented in Table 3-9 where the values are compared with the standard limit. Monitoring photographs and lab sheets are attached in Annexure 32 and Annexure 33.
51. According to the ground water quality parameters monitoring, all of them except Iron in Package 5 and 6 locations are under BD standard values. There has not been any groundwater degradation observed during this baseline monitoring period. There were no chemical and hazardous elements found leaching into the ground. Regular groundwater sampling will be conducted during the construction period.

**Table 3-9: Ground Water Quality Analysis of Package 2, 5 and 6 locations**

| SL<br>N<br>o                                      | Cod<br>e | Period       | Parameters Concentration |              |                         |                         |              |                    |                 |              |               |           |          |           |              |
|---------------------------------------------------|----------|--------------|--------------------------|--------------|-------------------------|-------------------------|--------------|--------------------|-----------------|--------------|---------------|-----------|----------|-----------|--------------|
|                                                   |          |              | Arseni<br>c (As)         | Chlorid<br>e | Colifor<br>m<br>(Fecal) | Colifor<br>m<br>(Total) | Iron<br>(Fe) | Manganes<br>e (Mn) | pH              | Salinit<br>y | Turbidit<br>y | EC        | TPH      | T         | Hardnes<br>s |
|                                                   |          |              | mg/L                     | mg/L         | N/100ml                 | N/100ml                 | mg/<br>L     | mg/L               | -               | ‰            | NTU           | µS/c<br>m | mg/<br>L | °C        | mg/L         |
| Package 2                                         |          |              |                          |              |                         |                         |              |                    |                 |              |               |           |          |           |              |
| Rampura- Bashundhara 132kV Underground Cable Line |          |              |                          |              |                         |                         |              |                    |                 |              |               |           |          |           |              |
| 1.                                                | GW1      | Baselin<br>e | 0.001                    | 45           | 0                       | 0                       | 0.3          | 0.03               | 7.8             | 0.21         |               |           |          |           |              |
|                                                   |          | Q1           | 0.001                    | 28           | 0                       | 0                       | 0.44         | 0.01               | 7.3             | 0.07         | 0.02          | 288       | <2.0     | 22.<br>8  | 430          |
| 2.                                                | GW2      | Baselin<br>e | 0.001                    | 40           | 0                       | 0                       | 0.06         | 0.03               | 7.7             | 0.15         |               |           |          |           |              |
|                                                   |          | Q1           | 0.002                    | 41           | 0                       | 0                       | 0.61         | 0.01               | 7.5             | 0.11         | 0.05          | 344       | <2.0     | 23.<br>1  | 390          |
| 3.                                                | GW3      | Baselin<br>e | 0.002                    | 20           | 0                       | 0                       | 0.07         | 0.03               | 7.7             | 0.13         |               |           |          |           |              |
|                                                   |          | Q1           | 0.002                    | 33           | 0                       | 0                       | 0.32         | 0.03               | 7.1             | 0.12         | 0.07          | 277       | <2.0     | 23.<br>9  | 250          |
| Package 5                                         |          |              |                          |              |                         |                         |              |                    |                 |              |               |           |          |           |              |
| 400/230 kV GIS Substation at Kaliganj, Gazipur    |          |              |                          |              |                         |                         |              |                    |                 |              |               |           |          |           |              |
| 4.                                                | GW4      | Baselin<br>e | 0.002                    | 19           | -                       | -                       | 1.1          | 0.03               | 7.3             | -            | 0.02          | 257       |          |           |              |
|                                                   |          | Q2           | 0.002                    | 21           | -                       | -                       | 1.3          | 0.02               | 7.1             | -            | 0.04          | 231       | -        | -         | -            |
| Package 6                                         |          |              |                          |              |                         |                         |              |                    |                 |              |               |           |          |           |              |
| 400/230/132 KV GIS Substation at Purbachal        |          |              |                          |              |                         |                         |              |                    |                 |              |               |           |          |           |              |
| 5.                                                | GW5      | Baselin<br>e | 0.001                    | 15           |                         |                         | 1.3          | 0.03               | 7.1             |              | 0.03          | 247       |          |           |              |
|                                                   |          | Q3           | 0.001                    | 17           | -                       | -                       | 1.2          | 0.03               | 7.2             | -            | 0.02          | 241       | -        | -         | -            |
| Bd Standard                                       |          |              | 0.05                     | 250          | 0                       | 0                       | 0.3-<br>1.0  | 0.4                | 6.5<br>-<br>8.5 | -            | 5             | -         | -        | 20-<br>30 | 500          |

Primary data Source: Department of Public Health & Engineering (DPHE) & Bangladesh Environmental Engineering Training & Lab Services Ltd. (BEETLSL) Laboratory, November 2024.

BDL= Below Detection Limit

### 3.3.3 Soil Quality

#### 3.3.3.1 Sampling Methods

52. Soil samples were collected from Three (03) locations of the Rampura- Bashundhara 132kV Underground Cable Line, two locations from 400/230 kV GIS Substation at Kaliganj, Gazipur and 400/230/132 KV GIS Substation at Purbachal on 22 October 2024. The samples were collected in a composite sampling method by Auger boring below the surface level. The Hand auger was used for soil sampling. The samples were first placed in zipped lock plastic bags and then transferred to appropriate plastic labeled jars. The collected soil samples were tested from the referred laboratory (Bangladesh Environmental Engineering Training & Lab Service Ltd. BEETLSL). The Locations and Descriptions of Soil Sampling are given in the following Table 13.

**Table 3-10: Locations and Descriptions of Soil Sampling of Package 2, 5 and 6 locations**

| Sl. No.                                           | Code | Sampling Location                                                  | GPS Coordinate             | Sampling Date |
|---------------------------------------------------|------|--------------------------------------------------------------------|----------------------------|---------------|
| Package 2                                         |      |                                                                    |                            |               |
| Rampura- Bashundhara 132kV Underground Cable Line |      |                                                                    |                            |               |
| 1.                                                | SQ 1 | Hospital, Near the Substation Area in Bashundhara Residential Area | 23.81656N<br>90.43605E     | 22.10.2024    |
| 2.                                                | SQ 2 | Mosque, Near United International University                       | 23.80374N<br>90.44242E     |               |
| 3.                                                | SQ 3 | Mosque, Near the Substation Area                                   | 23.76747N<br>90.42981E     |               |
| Package 5                                         |      |                                                                    |                            |               |
| 400/230 kV GIS Substation at Kaliganj, Gazipur    |      |                                                                    |                            |               |
| 4.                                                | SQ 4 | Hafej Sheikh's House                                               | 23.968512N<br>90.548888E   | 23.10. 2024   |
| Package 6                                         |      |                                                                    |                            |               |
| 400/230/132 KV GIS Substation at Purbachal        |      |                                                                    |                            |               |
| 5.                                                | SQ 5 | Beside Mohadev Karmakar's house                                    | 23.868053 N<br>90.476480 E | 22.10. 2024   |

Source: Quarterly Environmental Baseline Monitoring Report- November 2024 (Package 2, Package 5 and Package 6).

\*\*Monitoring dates and locations obtained from the Environmental Monitoring reports of the 3rd Party monitoring consultants appointed by EPC Contractors for the respective packages.

#### 3.3.3.2 Soil Quality Analysis Results

53. Analysis results of the Soil Quality are represented in Table 3-9 where the values are compared with the standard limit. Monitoring photographs and lab sheets are attached in Annexure 32 and Annexure 33.

54. Total five (05) samples were collected from Rampura- Bashundhara 132kV Underground Cable Line, 400/230 kV GIS Substation at Kaliganj, Gazipur and 400/230/132 KV GIS Substation at Purbachal area in the late autumn season and the test were analyzed in BEETLSL laboratory. It is important to figure out that there is no standard set out for soil quality analysis in Bangladesh. Therefore, Dutch standards has been used to analyze the soil quality which are environmental pollutant reference values (i.e., concentrations in environmental media) used in environmental remediation, investigation and cleanup. In conclusion, this standard is used worldwide to analysis the soil quality to preserve the soil from damage and repair past damage caused by human activity. However, all the values have been found below the standard.

**Table 3-11: Soil Quality Analysis of Package 2, 5 and 6 locations**

| SL No                                             | Code | Period   | Parameters Concentration |             |           |              |               |                      |
|---------------------------------------------------|------|----------|--------------------------|-------------|-----------|--------------|---------------|----------------------|
|                                                   |      |          | PH                       | Copper (Cu) | Lead (Pb) | Cadmium (Cd) | Chromium (Cr) | Organic Content (OC) |
|                                                   |      |          | mg/L                     | mg/L        | N/100ml   | N/100ml      | mg/L          | mg/L                 |
| Package 2                                         |      |          |                          |             |           |              |               |                      |
| Rampura- Bashundhara 132kV Underground Cable Line |      |          |                          |             |           |              |               |                      |
| 1                                                 | SQ1  | Baseline | 8.4                      | 0.53        | 7.03      | 0.18         | 13.15         | 0.46                 |
|                                                   |      | Q1       | 7.5                      | 0.57        | 5.24      | 0.07         | 10.38         | 0.77                 |
| 2                                                 | SQ2  | Baseline | 7.7                      | 1.18        | 8.13      | 0.26         | 14.81         | 1.45                 |
|                                                   |      | Q1       | 7.4                      | 0.49        | 8.28      | 0.12         | 8.82          | 1.22                 |
| 3                                                 | SQ3  | Baseline | 7.8                      | 1.13        | 9.45      | 0.1          | 14.81         | 0.89                 |
|                                                   |      | Q1       | 7.9                      | 0.86        | 3.44      | 0.04         | 6.33          | 0.88                 |
| Package 5                                         |      |          |                          |             |           |              |               |                      |
| 400/230 kV GIS Substation at Kaliganj, Gazipur    |      |          |                          |             |           |              |               |                      |
| 4                                                 | SQ4  | Baseline | 5.9                      | 3.07        | 9.12      | 0.83         | 41.23         | 6.21                 |
|                                                   |      | Q2       | 6.1                      | 2.71        | 6.12      | 0.68         | 39.32         | 7.43                 |
| Package 6                                         |      |          |                          |             |           |              |               |                      |
| 400/230/132 KV GIS Substation at Purbachal        |      |          |                          |             |           |              |               |                      |
| 5                                                 | SQ5  | Baseline | 6.1                      | 3.34        | 5.31      | 0.67         | 39.63         | 11.47                |
|                                                   |      | Q3       | 6.3                      | 2.54        | 7.31      | 0.72         | 46.63         | 9.47                 |
| Dutch Standards <sup>10</sup>                     |      |          | 0.05                     | 250         | 0         | 0            | 0.3-1.0       | 0.4                  |

Primary data Source: Bangladesh Environmental Engineering Training & Lab Services Ltd. (BEETLSL), November 2024.

BDL= Below Detection Limit

<sup>10</sup> Dutch Target and Intervention Values, 2000

## 4 ENVIRONMENTAL SUPERVISION AND MONITORING RESULTS

**Table 4-1: Environmental Supervision**

| SN | Date       | Type and Purpose of the visit                                                                                                        | Location (s) visited           | EA, IA, Consultant staff participating                           | Remarks                                                                                 |
|----|------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1. | 12.12.2024 | Physical visit/survey; Environmental and Social Inspection and EHS inspection at cable line route                                    | Basundhar a Rampura Cable Line | EQMS experts, Contractor EHS staff and Power Grid representative | Construction of the underground wiring tunnel                                           |
| 2. | 17.12.2024 | Physical visit/survey; Environmental and Social Inspection and EHS inspection at Substation                                          | Manirampur Substation          | EQMS experts, Contractor EHS staff and Power Grid representative | Construction of the boundary wall of the substation has been completed.                 |
| 3. | 18.12.2024 | Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site of Satkhira- Rupsha TL route.     | Satkhira- Rupsha               | EQMS experts, Contractor EHS staff and Power Grid representative | The inspection was done for the proposed transmission route from Satkhira to Rupsha     |
| 4. | 17.12.2024 | Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site of Satkhira- Manirampur TL route. | Satkhira- Manirampur           | EQMS experts, Contractor EHS staff and Power Grid representative | The inspection was done for the proposed transmission route from Satkhira to Manirampur |
| 5. | 18.12.2024 | Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site of Niamatpur- Patnitala TL route. | Bagerhat- Pirojpur Bhandaria   | EQMS experts, Contractor EHS staff and Power Grid representative | The inspection was done for the transmission route from Bagerhat- Pirojpur Bhandaria    |
| 6. | 19.12.2024 | Physical visit/survey; Environmental and Social Inspection and EHS inspection at Substation                                          | Meherpur Substation            | EQMS experts, Contractor EHS staff and Power Grid representative | Land filling has completed of the substation.                                           |

| SN | Date       | Type and Purpose of the visit                                                                                                       | Location (s) visited                       | EA, IA, Consultant staff participating                           | Remarks                                                                                            |
|----|------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 7. | 19.12.2024 | Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site of Kushtia- Meherpur TL route.   | Kushtia- Meherpur                          | EQMS experts, Contractor EHS staff and Power Grid representative | The inspection was done for the transmission route from Kushtia to Meherpur                        |
| 8. | 19.12.2024 | Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site of Kaliganj- Maheshpur TL route. | Kaliganj- Maheshpur                        | EQMS experts, Contractor EHS staff and Power Grid representative | The inspection was done for the transmission route from Kaliganj to Maheshpur                      |
| 9. | 31.12.2024 | Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site of Kaliganj- Maheshpur TL route. | Purba Sadipur- Domar and Domar- Hatibandha | EQMS experts, Contractor EHS staff and Power Grid representative | The inspection was done for the transmission route from Purba Sadipur- Domar and Domar- Hatibandha |

**Table 4-2: Budget for EMP Implementation**

| Item                     | Budgeted Amount                              | Spend to Date / Remarks                                     |
|--------------------------|----------------------------------------------|-------------------------------------------------------------|
| Tree Planting            | As per price schedule of individual packages | No claim for payment submitted by the contractors till date |
| Contractor's EMP Cost    |                                              |                                                             |
| EMoP Laboratory Analysis |                                              |                                                             |

## 4.1 Labor Management

55. For the construction of the project, all the workmen are engaged by contractor and the necessary amenities is provided as per applicable rules and regulations.

56. The contractor has maintained and followed the health and safety guidelines of WHO during the construction phase. In addition, the Contractor have close contact with the nearest hospitals and community clinic for any emergency.

## 4.2 Waste Management

Waste Management for the substations, store and construction sites are depicted in following Table 4-3.

**Table 4-3: Waste Management practice**

| Location                                  | Key wastes                                                                                                                                        | Collection Method                                                                                                                                                                                                           | Disposal Options                                                                                                                             |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Substations, store and construction sites | <ul style="list-style-type: none"> <li>Paper, Polythene bags, Plastics and wood</li> <li>Food waste,</li> </ul>                                   | <ul style="list-style-type: none"> <li>Segregated Dustbins</li> </ul>                                                                                                                                                       | <ul style="list-style-type: none"> <li>Authorized Third Party Waste Collector.</li> <li>Municipal Authority</li> </ul>                       |
| Substations, store and construction sites | <ul style="list-style-type: none"> <li>Waste oil, spent oil, grease, paint/thinner, diesel, lubricants, chemicals, Natural fiber ropes</li> </ul> | <ul style="list-style-type: none"> <li>Closed Container with Warning label for hazardous waste and Rest all in Dustbin</li> </ul>                                                                                           | <ul style="list-style-type: none"> <li>Authorized Collector for Hazardous Waste.</li> <li>Municipal Authority</li> </ul>                     |
| Substations and construction sites        | <ul style="list-style-type: none"> <li>E-waste (Light, Transformer, Switchgear, etc.), Metal waste, and metal wire</li> </ul>                     | <ul style="list-style-type: none"> <li>Store and store yard</li> <li>Will be segregated and stored on an impervious surface in a quarantine area. These will be disposed of as per the local legal requirements.</li> </ul> | <ul style="list-style-type: none"> <li>Authorized Third Party Waste Collector.</li> <li>Municipal Authority</li> </ul>                       |
| Substations, store and construction sites | <ul style="list-style-type: none"> <li>Medical waste like cotton, bandages, soiled bandages, etc.</li> </ul>                                      | <ul style="list-style-type: none"> <li>Black Color polythene inside a close lid plastic container</li> </ul>                                                                                                                | <ul style="list-style-type: none"> <li>To be sent to Authorized Hospital in a closed, labeled polythene bag for further disposal.</li> </ul> |

Also, contact details of the waste collector authority are mentioned in below Table 4-4.

**Table 4-4: Information on Waste Collector Authority**

| Package          | Waste Collector Authority                                                                                                                                                                                                                                                    | Contact Information                                                                                                     |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Package 1</b> | NA                                                                                                                                                                                                                                                                           | NA                                                                                                                      |
| <b>Package 2</b> | Jahurul Islam City Society<br>Bashundhara Housing Ltd.<br>United Housing Ltd.                                                                                                                                                                                                | 01711521139<br>02-8432008<br>02 55052000                                                                                |
| <b>Package 3</b> | Kaliganj Municipality, Jhenaidah,<br>Maheshpur Municipality, Jhenaidah<br>Meherpur Municipality, Meherpur<br>Alamdanga Municipality, Chuadanga<br>Kushtia Municipality, Kushtia<br>Manirampur Municipality, Jashore<br>Satkhira Municipality, Satkhira<br>Dumuria UP, Khulna | 01774-709195<br>01719818123<br>01716-037638<br>01915330444<br>01718-552606<br>01917147626<br>01740625615<br>01964784750 |
| <b>Package 4</b> | Niamatpur UP, Naogaon Nazipur<br>Municipality, Patnitala, Naogaon<br>Domar Municipality, Nilphamari<br>Barokhata UP, Hatibandha,<br>Lalmonirhat Pirojpur Municipality,<br>Pirojpur                                                                                           | 01632558978<br>01762334819<br>01724176353<br>01719867757<br>01918050542                                                 |
| <b>Package 5</b> | Gazipur City Corporation                                                                                                                                                                                                                                                     | 01717444650                                                                                                             |
| <b>Package 6</b> | Gazipur City Corporation                                                                                                                                                                                                                                                     | 01717444650                                                                                                             |

|                  |                                                                                                                                     |                                                           |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>Package 7</b> | Maheshpur Municipality, Jhenaidah<br>Meherpur Municipality, Meherpur<br>Manirampur Municipality, Jashore<br>Khulna City Corporation | 01719818123<br>01716-037638<br>01917147626<br>01916409376 |
| <b>Package 8</b> | NA                                                                                                                                  | NA                                                        |

### 4.3 Environmental Health and Safety

During reporting period (July- December 2024), toolbox trainings (TBT) were conducted in Package 2, 3, 4,5,6 and 7 and details of the TBT mentioned in Table 4-5. TBT attendance sheet was given in Annexure 31.

**Table 4-5: TBT Imparted During July- December 2024 in DWZTGEP**

| Month        | No. of TBT Conducted |            |            |           |           |           | No. of Participants |            |            |           |           |            | Remarks                                 |
|--------------|----------------------|------------|------------|-----------|-----------|-----------|---------------------|------------|------------|-----------|-----------|------------|-----------------------------------------|
|              | P2                   | P3         | P4         | P5        | P6        | P7        | P2                  | P3         | P 4        | P5        | P6        | P7         |                                         |
| Jul-24       | 27                   | 33         | 41         | 3         | 3         | 3         | 1458                | 143        | 64         | 3         | 5         | 10         | Attendance list depicted in Annexure-31 |
| Aug-24       | 26                   | 12         | 47         | 3         | 3         | 3         | 1404                | 104        | 64         | 3         | 3         | 12         |                                         |
| Sep-24       | 26                   | 0          | 35         | 3         | 3         | 3         | 1482                | 0          | 90         | 5         | 10        | 11         |                                         |
| Oct-24       | 27                   | 0          | 45         | 3         | 3         | 3         | 1431                | 0          | 105        | 10        | 10        | 17         |                                         |
| Nov-24       | 25                   | 111        | 48         | 3         | 3         | 3         | 1275                | 233        | 102        | 10        | 10        | 25         |                                         |
| Dec-24       | 27                   | 134        | 52         | 3         | 3         | 3         | 1593                | 288        | 120        | 10        | 10        | 28         |                                         |
| <b>Total</b> | <b>158</b>           | <b>290</b> | <b>268</b> | <b>18</b> | <b>18</b> | <b>18</b> | <b>8643</b>         | <b>768</b> | <b>545</b> | <b>41</b> | <b>48</b> | <b>103</b> |                                         |

**Table 4-6: Types of Material/ Waste**

| Type of Materials/Waste                                | Approximate Volume (units) | Source or Destination | Remarks                                      |
|--------------------------------------------------------|----------------------------|-----------------------|----------------------------------------------|
| Material examples:<br>Transformer Oil<br>Sand for Fill | -                          | -                     | No incident reported during reporting period |

## 4.4 Health and Safety Status

Health and Safety considerations during reporting period are mentioned in Table 4-7;

**Table 4-7: Health and Safety**

| Item                   | Current Status                                                                                                                                                                                                                                                                             | Locations              | Requirement or Mitigating Measures                                                                                                                                                                                      | Actions                                                                                                           | Remarks                                                                                                                                                          |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Security Measures | Lighting and surveillance cameras are available at all substations.<br><br>Proper fencing was not found in Package 5 and 6 and some of the construction site of SMTL and SRTL.<br><br>Training is provided frequently to the security personnel, and Proper registers are well maintained. | Package 2, 3, 4, and 7 | Proper fencing, lighting and surveillance cameras (if possible) should be available. Appointment and training of security personnel, maintenance of register during in and out (for both human, equipment and traffic). | Solid fencing should be available at all under construction sites before any kind of pre-construction activities. |                                                                                                                                                                  |
| Workers Welfare        | Safe and hygiene of the workplace are well maintained                                                                                                                                                                                                                                      | Package 2, 3, 4, and 7 | Ensure safe and hygiene workplace,                                                                                                                                                                                      | No actions required during reporting period                                                                       | Drinking water and safe sanitation facilities, PPE, safe accommodation, Fire safety and first aid facilities are available in construction sites and substations |
| PPE Inventories        | PPE inventories are available in construction sites and substations.<br><br>Some workers were found working without PPE                                                                                                                                                                    | Package 2, 3, 4, and 7 | PPE Inventories should be available at every construction site and substation.<br><br>All workers should wear proper PPE before working.                                                                                | It should be ensured by EHS manager of contractor that all workers are using                                      | PPE inventories of Package 2, 3 and 4 during Jul-Dec 2024 have been depicted in Annexure 29                                                                      |

| Item                                           | Current Status                                                                                                                                                                                                                                                                                                        | Locations              | Requirement or Mitigating Measures                                                                                                                | Actions                                                                                                                    | Remarks |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------|
|                                                |                                                                                                                                                                                                                                                                                                                       |                        |                                                                                                                                                   | PPE properly while working.                                                                                                |         |
| Medical and First Aid Provision                | First Aid facilities and MoU with local hospital are available for all construction sites and substations                                                                                                                                                                                                             | Package 2, 3, 4, and 7 | First Aid facilities and MoU with local hospital should be available for all construction sites and substations                                   | No actions required during reporting period                                                                                |         |
| Community Health and Safety                    | Segregated waste bins are present,<br>Vehicular movements are managed with proper scheduling and limited speed.                                                                                                                                                                                                       | Package 2, 3, 4, and 7 | Waste and traffic management should be well maintained                                                                                            | No actions required during reporting period                                                                                |         |
| Emergency Preparedness and Response Procedures | Contact lists for emergency support are available in most of the construction sites of Package 2, 4 and 7 substations. Although Contact lists for emergency support were not available at some of the construction sites of Package 3.<br>Also, firefighting and first aid training are given to the worker regularly | Package 2, 3, 4, and 7 | Emergency contact lists should be available at every site, and First aid and fire safety training should be provided to workers and other staffs. | Contact lists for emergency support should be available in all the construction sites in both Bengali and English language |         |
| Safety Equipment Record Sheet                  | Available and maintaining in all substation and construction sites                                                                                                                                                                                                                                                    | Package 2, 3, 4, and 7 | Should be maintained in all construction sites and substation                                                                                     | No actions required during reporting period                                                                                |         |

| Item      | Current Status | Locations              | Requirement or Mitigating Measures | Actions                                           | Remarks                                                    |
|-----------|----------------|------------------------|------------------------------------|---------------------------------------------------|------------------------------------------------------------|
| Incidents | Illness        | Package 2, 3, 4, and 7 |                                    | Recovered with proper medication and one day rest | Two cases of near miss occurred in Package 4 (Annexure 30) |

## 4.5 Meaningful Consultation and Grievance Redress

57. The PMU keeps records of all the grievances in a site-specific logbook (Annexure-16) and the first priority is to resolve the grievances locally through mutual consultation. If any grievance is not redressed at local level, the issue will be brought to the attention of the GRC and the GRC will consult with the relevant stakeholders to resolve the issue in the most amicable way possible, ensuring all the concerns of the relevant parties have been addressed. So far, no such issue has been forwarded to the GRC during this monitoring period (July- December 2024). Consultation pictures are shown in **Annexure 18**.

**Table 4-8: Consultation meetings held during July- December 2024**

| Package   | Consultation Date | Location            | Consultation Type  | Issue discussed                                                                                                   | No. of Participants |
|-----------|-------------------|---------------------|--------------------|-------------------------------------------------------------------------------------------------------------------|---------------------|
| Package 3 | 18.12.2024        | Senergati, Satkhira | KII with Landowner | Compensation, Occupancy of additional land, Movement Disturbances, Gender Violence, Grievances, Livelihoods, etc. | 1                   |
|           | 18.12.2024        | Senergati, Satkhira | KII with Landowner |                                                                                                                   | 1                   |
|           | 19.12.2024        | Bagerhat            | KII with Landowner |                                                                                                                   | 1                   |
|           | 19.12.2024        | Bagerhat            | KII with Landowner |                                                                                                                   | 1                   |
|           | 19.12.2024        | Bagerhat            | FGD                | Noise pollution and sometimes roads get partially damaged due to heavy vehicle movement                           | 7                   |
| Package 4 | 17.12.2024        | Gopalganj-Shibchar  | KII with Landowner | Compensation, Occupancy of additional land, Movement Disturbances, Gender Violence, Grievances, Livelihoods, etc. | 1                   |
|           | 17.12.2024        | Gopalganj-Shibchar  | FGD                | Dust Generation during dry season, Movement Disturbances, Gender Violence, Grievances, Livelihoods, etc.          | 6                   |

### 4.5.1 Findings of the Consultations

58. Major findings of the public consultation during the reporting period are mentioned below table.

| Stakeholders              | Findings                                                                                                                |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Local People, Landowners, | <ul style="list-style-type: none"> <li>Participants expressed that they received the compensations properly.</li> </ul> |

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sharecroppers, Female | <ul style="list-style-type: none"> <li>Not many disturbances are caused by project activities, not impacting on daily life and mobility of the local communities.</li> <li>Participants indicated awareness of the grievance logging process. However, it was noted that no formal complaints have been lodged yet.</li> <li>The project's impact on local livelihoods was a significant concern.</li> <li>Although no specific instances were reported, the topic of gender-based violence was brought up.</li> </ul> |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 4.6 Training and Awareness Activities

59. PIU has conducted day-long training on EHS for contractors of package- 2, 3, 4, 5, 6 and 7 as well as its own staff through the experts from EQMS Consulting Ltd (Annexure-17). The training was fruitful in creating awareness among the participants on the importance of EHS activities, determining shortfalls and ensuring proper corrective actions. Similar training program for the other contractors are initiated during reporting period. Attendance list and training picture are depicted in Annexure 17.

**Table 4-9: Summary of training programs imparted during July- December 2024**

| Package   | Cumulative no. of training program till Dec 2024 | Cumulative no. of participant till Dec 2024 |        |       |
|-----------|--------------------------------------------------|---------------------------------------------|--------|-------|
|           |                                                  | Male                                        | Female | Total |
| Package 2 | 9                                                | 103                                         | 0      | 103   |
| Package 3 | 7                                                | 98                                          | 0      | 98    |
| Package 4 | 25                                               | 274                                         | 0      | 274   |
| Package 7 | 9                                                | 80                                          | 0      | 80    |

**Table 4-10: Details of training programs imparted during July- December 2024**

| Training Title                 | Date and Venue | Category of Participants | No. of Participant |        |       |
|--------------------------------|----------------|--------------------------|--------------------|--------|-------|
|                                |                |                          | Male               | Female | Total |
| Package 2                      |                |                          |                    |        |       |
| Gang Induction                 | 08.08.2024     | Staff and Worker         | 10                 | 0      | 10    |
| EHS Induction                  | 12.08.2024     | Fitter, Helper, etc.     | 16                 | 0      | 16    |
| Fire Fighting Training         | 10.09.2024     | Staff and Worker         | 10                 | 0      | 10    |
| EHS Induction                  | 05.10.2024     | Helper, etc.             | 12                 | 0      | 12    |
| EHS Induction                  | 16.10.2024     | Fitter, Helper, etc.     | 18                 | 0      | 18    |
| Staff Induction                | 02.11.2024     | Staff                    | 10                 | 0      | 10    |
| Electrical Training            | 05.11.2024     | Staff and Worker         | 12                 | 0      | 12    |
| Gang Induction                 | 03.11.2024     | Staff and Worker         | 5                  | 0      | 5     |
| Fire Fighting Training         | 05.12.2024     | Staff and Worker         | 10                 | 0      | 10    |
| Package 3                      |                |                          |                    |        |       |
| Gang Induction                 | 20.07.2024     | Staff and Worker         | 15                 | 0      | 15    |
| Fire Fighting Training         | 14.11.2024     | Staff and Worker         | 14                 | 0      | 14    |
| EHS Induction                  | 21.11.2024     | Fitter, Helper, etc.     | 14                 | 0      | 14    |
| EHS Induction                  | 23.11.2024     | Fitter, Helper, etc.     | 15                 | 0      | 15    |
| EHS Induction                  | 6.12.2024      | Fitter, Helper, etc.     | 15                 | 0      | 15    |
| Electrical Competency Training | 04.12.2024     | Staff and Worker         | 10                 | 0      | 10    |

| Training Title                                   | Date and Venue | Category of Participants | No. of Participant |        |       |
|--------------------------------------------------|----------------|--------------------------|--------------------|--------|-------|
|                                                  |                |                          | Male               | Female | Total |
| Gang Induction                                   | 19.11.2024     | Staff and Worker         | 15                 | 0      | 15    |
| <b>Package 4</b>                                 |                |                          |                    |        |       |
| Fire Fighting Training                           | 18.07.2024     | Staff and Worker         | 11                 | 0      | 11    |
| First aid training                               | 15.07. 2024    | Workers & Staff          | 4                  | 0      | 4     |
| Snakes prevent training                          | 03.08. 2024    | Staff and Worker         | 10                 | 0      | 10    |
| Manual Material handling                         | 05.08. 2024    | Staff and Worker         | 10                 | 0      | 10    |
| Awareness about dengue                           | 22.09. 2024    | Staff and Worker         | 9                  | 0      | 9     |
| Work at Hight                                    | 25.09. 2024    | Worker                   | 25                 | 0      | 25    |
| HSE Documentation                                | 15.09. 2024    | Staff                    | 10                 | 0      | 10    |
| Emergency Respond plan                           | 08.09. 2024    | Staff and Worker         | 15                 | 0      | 15    |
| Manual material handling                         | 30.09. 2024    | Fitter, Helper, etc.     | 10                 | 0      | 10    |
| Water logging at location                        | 24.09. 2024    | Staff and Worker         | 10                 | 0      | 10    |
| Lifting tools                                    | 13.10. 2024    | Staff and Worker         | 9                  | 0      | 9     |
| Housekeeping store                               | 14.10. 2024    | Staff and Worker         | 10                 | 0      | 10    |
| Hight work                                       | 10.10. 2024    | workers                  | 10                 | 0      | 10    |
| BBS                                              | 05.10. 2024    | Staff and Worker         | 12                 | 0      | 12    |
| Manual material handling                         | 30.10. 2024    | Staff and Worker         | 11                 | 0      | 11    |
| Gang Induction                                   | 30.11. 2024    | Worker                   | 18                 | 0      | 18    |
| Store rules & Regulation                         | 14.11. 2024    | Security & Worker        | 10                 | 0      | 10    |
| Weast management system                          | 20.11. 2024    | Security & Worker        | 10                 | 0      | 10    |
| Protocol of security Agency                      | 22.11. 2024    | Security & Worker        | 10                 | 0      | 10    |
| LOTO                                             | 12.11. 2024    | Fitter, Helper, etc.     | 10                 | 0      | 10    |
| Use Of Power Tools                               | 10.11. 2024    | Fitter, Helper, etc.     | 10                 | 0      | 10    |
| Inspection of tools                              | 11.12. 2024    | Staff and Worker         | 10                 | 0      | 10    |
| Safety tips during snake bits                    | 21.12. 2024    | Staff and Worker         | 10                 | 0      | 10    |
| HIV                                              | 15.12. 2024    | Fitter, Helper, etc.,    | 10                 | 0      | 10    |
| Public announcement system before stringing work | 05.12. 2024    | Fitter, Helper, Staff,   | 10                 | 0      | 10    |
| <b>Package 7</b>                                 |                |                          |                    |        |       |
| Gang Induction                                   | 24.07.2024     | Staff and Worker         | 8                  | 0      | 8     |
| Fire Fighting Training                           | 25.07.2024     | Staff and Worker         | 10                 | 0      | 10    |
| EHS Induction                                    | 17.08.2024     | Fitter                   | 3                  | 0      | 3     |
| EHS Induction                                    | 11.09.2024     | Fitter, Helper, etc,     | 12                 | 0      | 12    |
| EHS Induction                                    | 16.10.2024     | Fitter, Helper, etc,     | 12                 | 0      | 12    |
| Staff Induction                                  | 17.10.2024     | Staff                    | 4                  | 0      | 4     |
| Electrical Training                              | 30.10.2024     | Staff and Worker         | 12                 | 0      | 12    |
| Gang Induction                                   | 15.11.2024     | Staff and Worker         | 11                 | 0      | 11    |
| Fire Fighting Training                           | 19.12.2024     | Staff and Worker         | 8                  | 0      | 8     |

## 4.7 Status of CAP

ADB participated in the mission from 29 April 2024 to 01 May 2024. During the mission ADB visited Kushtia, Meherpur, Manirampur, Kaliganj, Maheshpur, Satkhira and Khulna site and found out some poor compliance issues and recommended some Corrective Action that needs to be corrected to improve the safeguarding status of construction site. Status of the raised corrective actions during the last ADB mission are discussed in the following Table 4-11;

**Table 4-11: Status of the CAP**

| Sl. No. | Recommended Corrective Action                                                                                                                                                        | Present Status | Remarks                                                                                                                                                                                                                                                                                                                                        |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.      | Majority of the workers do not have identity cards;                                                                                                                                  | Complied       | Mostly local workers leave their workplace, and contractors must hire new workers frequently. That makes a complication providing identity cards to the workers hired shortly. However, contractors should provide temporary ID cards to the workers hired shortly.<br>ID cards were found at all sites during the reporting period            |
| 2.      | Schedule for half an hour rest was not maintained at all sites                                                                                                                       | Not Complied   | Schedule for half an hour rest was not maintained at all sites. As workers are more interested in taking rest as their own need basis. Contractors were not maintaining any Schedule register for half an hour rest                                                                                                                            |
| 3.      | There was no record found for the waste (dried piling mud and empty plastic bags)                                                                                                    | Being Complied | There was no record found for the waste (Dried Piling mud) received and used by local people and plastic waste (empty plastic bags) was reused by contractors and workers. Contractors are trying to maintain a register to track the amount of waste received by local people.<br>Waste inventory for Package 2, 3 and 4 added in Annexure 21 |
| 4.      | To prevent the spillage of hazardous and non-hazardous materials, such as transformer oil and PCBs, retrofitting of proper impermeable bunds and secondary containers should be used | Being Complied | Secondary containers were found under oil containers and generator motor in some sites to prevent oil spillage. Also, retro fitting should be implemented at all sites                                                                                                                                                                         |
| 5.      | Piling works generate >85dBA exceeding environmental and OHS limits                                                                                                                  | Being Complied | Ear plugs were available at sites but some of the workers were not using them when working in >85dBA zone (while working with generator, metal cutting machine, etc.)                                                                                                                                                                          |
| 6.      | Inappropriate Grievance Box placement                                                                                                                                                | Complied       | Grievance Box is placed in right order Annexure 23                                                                                                                                                                                                                                                                                             |
| 7.      | Lack of understanding of OHS requirements by the sub-contractor                                                                                                                      | Complied       | Capacity building training should be carried out for all sites and strong follow up for the implementation should be initiated by the contractor                                                                                                                                                                                               |

| Sl. No. | Recommended Corrective Action                                                                                                                                                                                                                                                                                                                            | Present Status | Remarks                                                                                                                                        |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.      | Lack of capacity building training to workers;                                                                                                                                                                                                                                                                                                           | Complied       | Contractor is providing Capacity building workshops to the subcontractors and workers regularly.                                               |
| 9.      | No progress on the tree plantation plan (TPP)                                                                                                                                                                                                                                                                                                            | Being Complied | Experts are carrying out a study for integrated TPP                                                                                            |
| 10.     | Signboards with project information and contact details were not installed where work commenced                                                                                                                                                                                                                                                          | Complied       | Contact details and Signboards with project information were found in every site                                                               |
| 11.     | Task specific safety checklist for excavation work, piling and rigging, work at height, scaffolding, crane & lifting safety, heavy equipment operation, traffic management, electrical work, hot works, fire safety, gas cylinder safety, chemical safety, emergency response, personal protective equipment etc. should be maintained by the contractor | Being Complied | Task specific safety checklist is available for Package 3 and 4. PMU will ensure developing task specific safety checklist for other packages. |
| 12.     | PMU should improve the quality of the EMR covering the signed task specific safety checklists                                                                                                                                                                                                                                                            | Being Complied | PMU is arranging a monthly coordination meeting with all conductors to improve the quality of EMR.                                             |
| 13.     | Preparation and approval of Construction Environmental and Social Management Plan (CESMP) for Packages-2, 3, 4, 5, 6 and 7.                                                                                                                                                                                                                              | Complied       | Approved CSEMP link was attached to Annexure 4                                                                                                 |
| 14.     | Capacity building program for contractors for Packages-2, 3, 4, 5, 6 and 7.                                                                                                                                                                                                                                                                              | Complied       | Capacity building program for contractors were carried out on 28 <sup>th</sup> August 2024 (Annexure 17)                                       |
| 15.     | Disclose the safeguards documents such as IEE, Addendum of IEE and EMRs on the project website, similar to the approach on the ADB website.                                                                                                                                                                                                              | Complied       | Power Grid disclosed the safeguards documents on the project website (Annexure 14 and 15)                                                      |

Among the ten (15) ADB recommended corrective actions eight (08) considerations are compiled and six (06) considerations will be complied accordingly and the timeline for converting being complied to complied are mentioned in below table.

**Table 4-12: Corrective action plan for Jan- Jun 2025**

| Sl. | Environmental Issues                                           | Recommended Corrective Measures                     | Responsibility | Package (P)       | Implementation Timeline |
|-----|----------------------------------------------------------------|-----------------------------------------------------|----------------|-------------------|-------------------------|
| 1.  | Schedule for half an hour rest was not maintained at all sites | Schedule for half an hour rest should be maintained | Contractor     | P2, P3, P4 and P7 | January- June 2025      |

| Sl. | Environmental Issues                                                                                                                                                                                                                                                                                          | Recommended Corrective Measures                                                                                                                                                                                                | Responsibility | Package (P)               | Implementation Timeline |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------|-------------------------|
|     |                                                                                                                                                                                                                                                                                                               | strictly through register                                                                                                                                                                                                      |                |                           |                         |
| 2.  | To prevent the spillage of hazardous and non-hazardous materials, such as transformer oil and PCBs, retrofitting of proper impermeable bunds and secondary containers should be used                                                                                                                          | Secondary containers should be available for all possible sources of spillage. Specially, under the oil container and motor of generator.<br>Also, retro fitting should be implemented for oil carrying pipelines at all sites | Contractor     | P2, P3, P4, P5, P6 and P7 | February- March 2025    |
| 3.  | Piling works generate >85dBA exceeding environmental and OHS limits                                                                                                                                                                                                                                           | Ear buds should be available at all construction sites.                                                                                                                                                                        | Contractor     | P2, P3, P4, P5, P6 and P7 | February- 2025          |
| 4.  | No progress on the tree plantation plan (TPP)                                                                                                                                                                                                                                                                 | Integrated TPP should be available for all packages                                                                                                                                                                            | PMU            | P3                        | January- June 2025      |
| 5.  | Site Security Measures, Lighting and surveillance cameras are available at all substations.<br>Proper fencing was not found in Package 5 and 6 and some of the construction site of SMTL and SRTL.<br>Training is provided frequently to the security personnel, and<br>Proper registers are well maintained. | Solid fencing should be available at all under construction sites before any kind of pre- construction activities.                                                                                                             | Contractor     | All packages              | January- June 2025      |
| 6.  | PPE inventories are available in                                                                                                                                                                                                                                                                              | PPE Inventories should be                                                                                                                                                                                                      | Contractor     | All Packages              | January- June 2025      |

| Sl. | Environmental Issues                                                                   | Recommended Corrective Measures | Responsibility | Package (P) | Implementation Timeline |
|-----|----------------------------------------------------------------------------------------|---------------------------------|----------------|-------------|-------------------------|
|     | construction sites and substations.<br><br>Some workers were found working without PPE | available for all packages      |                |             |                         |

#### 4.8 Status of CAP of the Existing Substations

Status of the corrective actions of existing substations and the present status of the corrective actions are mentioned in Table 4-13 and pictorial evidence is depicted in Annexure 34.

**Table 4-13: Status of CAP of the Existing Substations**

| Sl no | Name of the Substation   | Issues mentioned for improvement during the audit                                                                                                                                                 | Responsibility | Present status                                                                                                                             |
|-------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1.    | Purba Sadipur substation | The substation needs yard cleanness and appropriate waste handling and disposal practices.                                                                                                        | Power Grid     | Switchyard cleaning and waste handling are routinely done by the concerned GMD (Grid Maintenance Division) of Power Grid.                  |
|       |                          | Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting proper impermeable bund to 110% capacity. | Power Grid     | PIU will request the concerned GMD to improve storage arrangement and spillage prevention before commencing physical works.                |
| 2.    | Kushtia substation       | The substation needs yard cleanness and appropriate waste handling and disposal practices.                                                                                                        | Power Grid     | Switchyard cleaning has been performed by the concerned GMD. Spillage of transformer oil was rectified during the last annual maintenance. |
|       |                          | Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting proper impermeable bund to 110% capacity. | Power Grid     | PIU has requested the GMD to improve storage arrangements which will be done by GMD's own renovation schedule.                             |
| 3.    | Bagerhat substation      | The substation needs yard cleanness and appropriate waste handling and disposal practices.                                                                                                        | Power Grid     | Switchyard cleaning and waste handling are routinely done by the concerned GMD of Power Grid.                                              |

| SI no | Name of the Substation | Issues mentioned for improvement during the audit                                                                                                                                                 | Responsibility | Present status                                                                                                                   |
|-------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------|
|       |                        | Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting proper impermeable bund to 110% capacity. | Power Grid     | PIU will request the concerned GMD to improve storage arrangement and spillage prevention before commencing physical works.      |
| 4.    | Bhandaria substation   | The substation needs yard cleanness and appropriate waste handling and disposal practices.                                                                                                        | Power Grid     | Switchyard cleaning and waste handling are routinely done by the concerned GMD of Power Grid.                                    |
|       |                        | Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting proper impermeable bund to 110% capacity. | Power Grid     | PIU will request the concerned GMD to improve storage arrangement and spillage prevention before commencing physical works.      |
| 5.    | Niamatpur substation   | The substation needs the yard cleanness and appropriate waste handling and disposal practices.                                                                                                    | Power Grid     | Switchyard cleaning and waste handling are routinely done by the concerned GMD of Power Grid.                                    |
|       |                        | Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting proper impermeable bund to 110% capacity. | Power Grid     | PIU will request the concerned GMD to improve storage arrangement and spillage prevention before commencing physical works.      |
| 6.    | Satkhira substation    | The substation needs the yard cleanness and appropriate waste handling and disposal practices.                                                                                                    | Power Grid     | Switchyard cleaning has been performed by the concerned GMD. At present there are no leakage in the existing power transformers. |
|       |                        | Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting                                           | Power Grid     | PIU has requested the GMD to improve storage arrangement which will be done by GMD's own renovation schedule.                    |

| SI no | Name of the Substation | Issues mentioned for improvement during the audit | Responsibility | Present status |
|-------|------------------------|---------------------------------------------------|----------------|----------------|
|       |                        | proper impermeable bund to 110% capacity.         |                |                |

## 4.9 Performance Level on Environmental Supervision and Monitoring Result During July- December 2024

Performance Level of Environmental Supervision and Monitoring Result are evaluated through the consideration of the compliance maintained during study period such as Labor Management, Waste Management, EHS, Health and Safety, Meaningful Consultation and Grievance Redress, Training and Awareness Activities and Status of CAP. Ranking was done in the basis of level of compliances maintained during study period. Any considerations complied with more than 80 %, 70%, 60%, 50% will be ranked as Satisfactory (5), Moderately Satisfactory (4), Need to be Improve (3), Not Satisfactory (2) and if it is compiled below 40% will be ranked as Immediate Action Required (1). In this reporting period, status of the CAP was found Need to be Improve (3). PMU is working on the considerations mentioned in CAP and will be complied with the CAP during the next reporting period.

Comparison of Performance level on Environmental Supervision and Monitoring Result with previous EMR result are mentioned in Table 4-14.

**Table 4-14: Comparison of Performance level on Environmental Supervision and Monitoring Result of Current EMR (July- December 2024) with previous EMR result.**

| Indicators                                    | 2 <sup>nd</sup> EMR<br>(Jul- Dec)<br>2022 | 1 <sup>st</sup> EMR<br>(Jan- Jun)<br>2023 | 2 <sup>nd</sup> EMR<br>(Jul- Dec)<br>2023 | 1 <sup>st</sup> EMR<br>(Jan- Jun)<br>2024 | 2 <sup>nd</sup> EMR (Jul-<br>Dec) 2024 |
|-----------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------|
| Labor Management                              | 5                                         | 4                                         | 5                                         | 4                                         | 4                                      |
| Waste Management                              | 2                                         | 5                                         | 4                                         | 4                                         | 4                                      |
| EHS                                           | 2                                         | 4                                         | 5                                         | 4                                         | 4                                      |
| Health and Safety                             | 2                                         | 2                                         | 5                                         | 4                                         | 4                                      |
| Meaningful Consultation and Grievance Redress | 5                                         | 5                                         | 5                                         | 4                                         | 4                                      |
| Training and Awareness Activities             | 5                                         | 5                                         | 5                                         | 3                                         | 5                                      |
| Status of CAP                                 | 5                                         | 5                                         | 4                                         | 4                                         | 3                                      |

Note: Ranking:

Satisfactory- 5

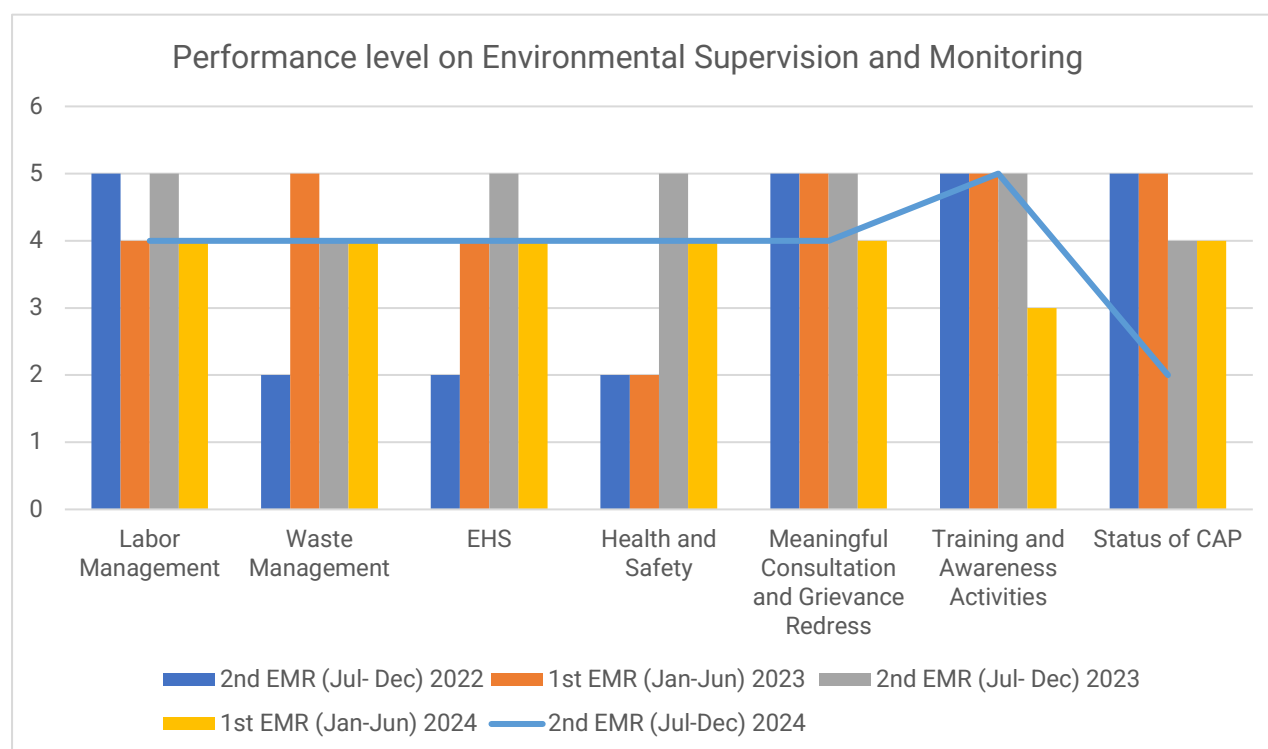
Moderately Satisfactory- 4

Need to be Improve- 3

Not Satisfactory- 2

Immediate Action Required- 1

**Figure 4-1: Graphical Presentation of Performance level on Environmental Supervision and Monitoring Result with previous EMR result.**



## 5 CONCLUSION

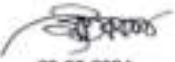
The Environmental Safeguard Monitoring Report evaluates compliance across critical areas such as labor management, waste handling, environmental health and safety (EHS), and meaningful stakeholder consultations during the reporting period of July–December 2024. Performance levels were ranked using a compliance scale from satisfactory (5) to immediate action required (1). Most indicators, including labor management, waste management, EHS, and training activities, achieved satisfactory or moderately satisfactory rankings. However, the status of the Corrective Action Plan (CAP) was rated as needing improvement (3), reflecting areas for focused effort.

Key environmental quality monitoring, such as air, water, and soil assessments, showed mixed compliance with Bangladesh standards. While some metrics, including air quality, remained below national thresholds, deviations in water quality parameters, particularly in certain packages, underscore the need for better mitigation efforts.

The report highlights the ongoing engagement of the Project Management Unit (PMU) and contractors to address gaps in the CAP and environmental management activities. These findings provide a roadmap for improving environmental compliance, enhancing operational safety, and ensuring sustainability in future phases of the project.

## ANNEXURE

### Annexure-1: Renewal of Environmental Clearance Certificate

|                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Government of the People's Republic of Bangladesh<br/>Ministry of Environment, Forest and Climate<br/>Change<br/>Department of Environment<br/>Environment Clearance Section<br/>www.doe.gov.bd</p>                                                                                                                                                                                                                         |                                                                                                                                          |
| Record Number: 22.02.0000.018.72.055.20.84                                                                                                                                                                                                                                                                                                                                                                                     | Date: 29/08/2024                                                                                                                         |
| <p><b>Subject: Renewal of Environmental Clearance for Dhaka and Western Zone Transmission Grid Expansion Project of Power Grid Company of Bangladesh Ltd.</b></p>                                                                                                                                                                                                                                                              |                                                                                                                                          |
| Reference: Memo no: 27.21.0000.453.014.000.24.975; dated 04.08.2024                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                          |
| <p>With reference to your above application, the Department of Environment hereby renews the Environmental Clearance of Dhaka and Western Zone Transmission Grid Expansion Project of Power Grid Company of Bangladesh Ltd. The terms and conditions stated in the Environmental Clearance of the above project issued on 28.07.2020 vide memo no. 22.02.0000.018.72.055.20.160 shall remain valid for the renewed period.</p> |                                                                                                                                          |
| <p>2. This renewal is valid up to 27 July, 2025. For further renewal an application along with a) the renewal fees (as per the ECR, 2023) b) VAT on renewal fees (in separate Treasury Chalan) and c) all associated documents shall be submitted to the Head Office of DoE at least 30 days ahead of expiry date.</p>                                                                                                         |                                                                                                                                          |
| <br>29-08-2024<br>Masud Iqbal Md Shamsam<br>Director<br>222218342<br>direc@doe.gov.bd                                                                                                                                                                                                                                                      |                                                                                                                                          |
| <p>Project Director (Chief Engineer), Dhaka and Western Zone Transmission Grid Expansion Project,<br/>Power Grid Company of Bangladesh Ltd. (PGCB) PGCB Bhaban, Avenue-03, Jahurul Islam City<br/>Aftabnagar, Badda, Dhaka.</p>                                                                                                                                                                                                |                                                                                                                                          |
| Record Number: 22.02.0000.018.72.055.20.84/1 (2)                                                                                                                                                                                                                                                                                                                                                                               | Date: 29/08/2024                                                                                                                         |
| (Not in the order of                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                          |
| <p><b>Copy for Kind Information and Necessary Action seniority)</b></p>                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                          |
| <p>1. Director, Department of Environment, Dhaka Regional/Rajshahi/Khulna/Barishal/Rangpur Divisional Office, Dhaka/Bogura/Khulna/Barishal/Rangpur and</p>                                                                                                                                                                                                                                                                     |                                                                                                                                          |
| <p>2. Assistant Director, Office of the Director General, Department of Environment, Head Office, Dhaka.</p>                                                                                                                                                                                                                                                                                                                   |                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                             | <br>29-08-2024<br>Masud Iqbal Md Shamsam<br>Director |

## Annexure-2: SCC-47

### 47. Environmental Management Plan

The Contractor shall comply with all applicable national, provincial and local environmental laws and regulations.

The Contractor shall (a) establish an operational system for managing environmental impacts, (b) carry out all of the monitoring and mitigation measures set forth in the [Initial Environmental Examination ("IEE")] or [Environmental Management Plan ("EMP")] and (c) allocate the budget required to ensure that such measures are carried out. The Contractor shall submit semi-annual reports on the carrying out of such measures to the Employer.

More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the initial environmental examination and the environmental management plan attached hereto as Appendix [2.3]; and (ii) any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor implementation of the initial environmental examination and the environmental management plan.

The Contractor shall allocate a budget for compliance with these measures, requirements and actions."

Appendix to SCC (will be provided in PDF form) with the bidding document):

1. Resettlement Plan (RP)
2. Initial Environment Examination (IEE)
3. Environment management Plan (EMP)

## Annexure-3: SCC-9.8 (c)

### 9. Contractor's Responsibilities

**A new Sub-Clause 9.8.c) is added:**

9.8.c) The Contractor shall elaborate and submit for approval within 30 (thirty) days from the Effective Date of the contract, his own and works-specific (Construction) Environmental and Social Management Plan ((C)ESMP) in line with the ESMP attached in this section. The Employer shall comment or approve the document within 14 days from the receipt. The final (C) ESMP should be concluded in joint workshops between the authorized representatives of the Employer and the Contractor.

## Annexure-4: Link to Approved CESMPs

<https://drive.google.com/drive/folders/1DIJJYg-ItKw7izRHxLEvEKG2SOLni2HB?usp=sharing>

## Annexure-5: SCC 22.2.7

### 22.2.7 Health and Safety

- (d) The Contractor shall throughout the contract (including the Defect Liability Period):
- (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labour (including all the Contractor's employees, all Sub-Contractors and Employer's and Project Manager's employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities particularly women, concerning the risks, dangers and impact, and appropriate avoidance behaviour with respect to of Sexually Transmitted Diseases (STD) - or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular;
  - (ii) provide male or female condoms for all Site staff and labour as appropriate; and
  - (iii) provide for STI and HIV/AIDS screening, diagnosis, counselling and referral to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labour.
  - (iv) conduct health and safety programs for workers employed under the project, and shall include information on the trafficking of women and the risk of sexually transmitted diseases, including HIV/AIDS in such programs.

## Annexure-6: GCC 22.2

### 22.2 Labor

#### 22.2.1 Engagement of Staff and Labor

- (a) Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labor, local or otherwise, and for their payment, housing, feeding, and transport.
- (b) The Contractor shall provide and employ on the Site in the installation of the Facilities such skilled, semi-skilled, and unskilled labor as is necessary for the proper and timely execution of the Contract. The Contractor is encouraged to use local labor that has the necessary skills.
- (c) The Contractor shall be responsible for obtaining all necessary permit(s) and/or visa(s) from the appropriate authorities for the entry of all labor and personnel to be employed on the Site into the country where the Site is located. The Employer will, if requested by the Contractor, use his best endeavors in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.
- (d) The Contractor shall at its own expense provide the means of repatriation to all of its and its Subcontractor's personnel employed on the Contract at the Site to the place where they were recruited or to their domicile. It shall also provide suitable temporary maintenance of all such persons from the cessation of their employment on the Contract to the date programmed for their departure. In the event that the Contractor defaults in providing such means of transportation and temporary maintenance, the Employer may provide the same to such personnel and

recover the cost of doing so from the Contractor.

#### **22.2.2 Persons in the Service of Employer**

The Contractor shall not recruit, or attempt to recruit, staff and labor from amongst the Employer's Personnel.

#### **22.2.3 Labor Laws**

- (a) The Contractor shall comply with all the relevant labor Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration, and emigration, and shall allow them all their legal rights.
- (b) The Contractor shall at all times during the progress of the Contract use its best endeavors to prevent any unlawful, riotous, or disorderly conduct or behavior by or amongst its employees and the labor of its Subcontractors.
- (c) The Contractor shall, in all dealings with its labor and the labor of its Subcontractors currently employed on or connected with the Contract, pay due regard to all recognized festivals, official holidays, religious, or other customs and all local laws and regulations pertaining to the employment of labor.

#### **22.2.4 Rates of Wages and Conditions of Labor**

- (a) The Contractor shall pay rates of wages, and observe conditions of labor, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.
- (b) The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, and allowances as are chargeable under the Laws for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws.

#### **22.2.5 Working Hours**

- (a) No work shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the SCC, unless
  - (i) otherwise stated in the Contract;
  - (ii) the Project Manager gives consent; or
  - (iii) the work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall

SCC.

**22.2.9 Records of Contractor's Personnel**

The Contractor shall keep accurate records of the Contractor's personnel, including the number of each class of Contractor's Personnel on the Site and the names, ages, gender, hours worked, and wages paid to all workers. These records shall be summarized on a monthly basis in a form approved by the Project Manager and shall be available for inspection by the Project Manager until the Contractor has completed all work.

**22.2.10 Supply of Foodstuff**

The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.

**22.2.11 Supply of Water**

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

**22.2.12 Measures against Insect and Pest Nuisance**

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce their danger to health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

**22.2.13 Alcoholic Liquor or Drugs**

The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give barter, or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift barter, or disposal by Contractor's Personnel.

**22.2.14 Arms and Ammunition**

The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.

**22.2.15 Prohibition of All Forms of Forced or Compulsory Labor**

The contractor shall not employ "forced or compulsory labor" in any form. "Forced or compulsory labor" consists of all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.

**22.2.16 Prohibition of Harmful Child Labor**

The Contractor shall not employ any child to perform any work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

Immediately advise the Project Manager.

- (b) If and when the Contractor considers it necessary to carry out work at night or on public holidays so as to meet the Time for Completion and requests the Project Manager's consent thereto, the Project Manager shall not unreasonably withhold such consent.
- (c) This Subclause shall not apply to any work which is customarily carried out by rotary or double shifts.

#### **22.2.6 Facilities for Staff and Labor**

- (a) Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Specification.
- (b) The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

#### **22.2.7 Health and Safety**

- (a) The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay, and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.
- (b) The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the performance of the Contract, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.
- (c) The Contractor shall send to the Project Manager, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety, and welfare of persons, and damage to property, as the Project Manager may reasonably require.

#### **22.2.8 Funeral Arrangements**

In the event of the death of any of the Contractor's personnel or accompanying members of their families, the Contractor shall be responsible for making the appropriate arrangements for their return or burial, unless otherwise specified in the

## Annexure-7: GRC



**পাওয়ার গ্রিড কোম্পানি অফ বাংলাদেশ লিঃ**  
**POWER GRID COMPANY OF BANGLADESH LTD.**  
(An Enterprise of Bangladesh Power Development Board)


Ref. No.: 27.21.0000.453.06.001.21.122 Date: 04/03/2021

### Office Order

As per approval of PGCB management a Grievance Redress Committee for "Dhaka & Western Zone Transmission Grid Expansion Project" has been formed by following members:

| Sl. No. | Name & Designation                                                                     | Name of the Office            | Status in Committee |
|---------|----------------------------------------------------------------------------------------|-------------------------------|---------------------|
| 1.      | Deputy Project Director of concerned package                                           | DWZTGEP, PGCB                 | Convener            |
| 2.      | Executive Engineer of concerned package                                                | DWZTGEP, PGCB                 | Member              |
| 3.      | Manager Accounts & Admin                                                               | DWZTGEP, PGCB                 | Member              |
| 4.      | Sub-Divisional Engineer / Assistant Engineer / Sub Asst. Engineer of concerned package | DWZTGEP, PGCB                 | Member              |
| 5.      | Project Manager or representative of concerned Turnkey Contractor                      | Concern Turnkey Contractor    | Member              |
| 6.      | Representative of RAP implementation consultant.                                       | RAP implementation consultant | Member              |
| 7.      | Local Union Parishad Member                                                            | Union Parishad                | Member              |

Committee will manage construction related complaints & payment for compensation and make report time to time to undersigned.

  
**(Md. Sharfuddin Hossain)**  
 Project Director (CE)  
 Dhaka & Western Zone Transmission  
 Grid Expansion Project  
 Mobile No: 01713850419

Copy to:

1. Managing Director, PGCB
2. Executive Director (P&D/O&M/Finance), PGCB
3. Chief Engineer, (P&D), PGCB
4. Mr. ....... Convener/ Member of the Committee
5. BRM, ADB, Dhaka.
6. Office Copy.

## Annexure-8: Compensation Paid by the Contractor to the Local Community

Compensation Paid by the Contractor to the Local Community will be described in SMR report, December 2023.

## Annexure-9: Waste Collection and Separation



Bagerhat Store (Package 4)

## Annexure-10: Covering of Construction Materials



Store at Nilphamari (Package 4)



BPBTL (Package 4)

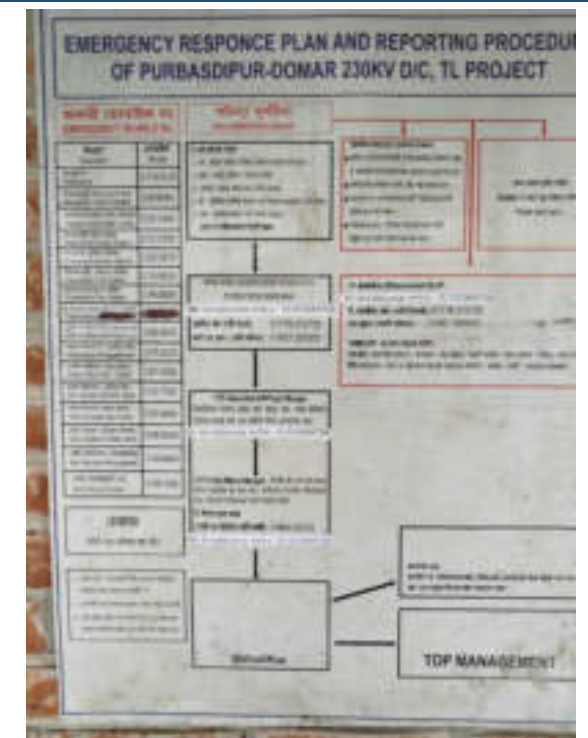
## Annexure-11: Ensuring Personal Safety and Emergency Contact Information



Domar Hatibandha TL (Package 4)



Madaripur Store (Package 4)

|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|   |   |
| PurbaSadipur Domar TL (Package 4)                                                  | Satkhira Manirampur TL (Package 3)                                                  |
|  |  |
| Purba Sadipur Domar TL (Package 4)                                                 | Bagerhut Store (Package 4)                                                          |

## Annexure-13: PIU Set-Up



## Annexure-14: Link to Baseline Data

[https://drive.google.com/drive/folders/116Pv1\\_8bc5\\_ZwPFahPxxvtiOzxm9vo73?usp=sharing](https://drive.google.com/drive/folders/116Pv1_8bc5_ZwPFahPxxvtiOzxm9vo73?usp=sharing)

## Annexure-15: Link to IEE Addendum

<https://drive.google.com/drive/folders/1ZTrPGCGgXb6JOVO9s01w81tFeKq7Xrlj?usp=sharing>

## Annexure-16: Complain Logbook and Leaflets

|                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p style="text-align: center;"><b>অভিযোগ প্রতিকার ব্যবস্থা</b></p> <p style="text-align: center;">ক্ষোভ যুক্তি সংগত কিংবা বাস্তব সম্মত<br/>হোক বা না হোক তার প্রতিকার চাওয়ার<br/>একটি কার্যকর প্রাটিকর্ম</p> <p style="text-align: center;"></p> <p style="text-align: center;">পাওয়ার গ্রিড বাংলাদেশ লিমিটেড</p> | <p style="text-align: center;"><b>অভিযোগ প্রতিকার ব্যবস্থা<br/>সংক্রান্ত তথ্য</b></p> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="background-color: #d4edda; padding: 5px; border-radius: 5px; margin-left: 10px;"> <p>(<a href="http://www.pgcb.gov.bd">www.pgcb.gov.bd</a>) এ প্রকাশিত<br/>অভিযোগ প্রতিকার কমিটি সংক্রান্ত তথ্য<br/>পড়ার যাবে</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="background-color: #d4edda; padding: 5px; border-radius: 5px; margin-left: 10px;"> <p>এছাড়া (ইমেইল: <a href="mailto:info@pgcb.org.bd">info@pgcb.org.bd</a>,<br/>ফোন: +৮৮০১৫৫০০৪৬৭৩১-৩৪, ফ্যাক্স<br/>+৮৮০১৫৫০০৪৬৭২২) এর মাধ্যমে অভিযোগ<br/>দাখিল করা যাবে</p> </div> </div> <div style="display: flex; align-items: center;">  <div style="background-color: #d4edda; padding: 5px; border-radius: 5px; margin-left: 10px;"> <p>গ্রাউন্ড সার্ভিস/অফিসে নিযুক্ত কর্মী এর<br/>মাধ্যমে অভিযোগ গ্রহণ ও প্রাপ্তি বীকার<br/>প্রদানের ব্যবস্থা রয়েছে</p> </div> </div> <p style="text-align: center;"> পাওয়ার গ্রিড বাংলাদেশ লিমিটেড</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Annexure-17: EHS and Other Training and Attendance List of the Training

### Package 2

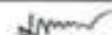


### Package 3

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
|    |    |
| <b>Package 4</b>                                                                    |                                                                                      |
|  |  |
|  |  |
| <b>Package 7</b>                                                                    |                                                                                      |



### Training Attendance Sheet

|                        |        |                                                                                   |                                                                                       |
|------------------------|--------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Name of the Project    |        | Dhaka and Western Zone Transmission Grid Expansion Project (Package-2)            |                                                                                       |
| Title of Training      |        | Date of Training                                                                  |                                                                                       |
| Fire fighting Training |        | 05-12-2024                                                                        |                                                                                       |
| Name of Trainer        |        | Signature of Trainer                                                              | Venue                                                                                 |
| Saikat kumar           |        |  | Project site                                                                          |
| SN                     | Name   | Designation                                                                       | Signature                                                                             |
| 1                      | রাফাত  | অফিস                                                                              |    |
| 2                      | সুমন   | অফিস                                                                              |    |
| 3                      | রাফান  | অফিস                                                                              | রাফান                                                                                 |
| 4                      | রনি    | অফিস                                                                              | রনি                                                                                   |
| 5                      | আব্বাস | অফিস                                                                              | আব্বাস                                                                                |
| 6                      | শাকু   | অফিস                                                                              | শাকু                                                                                  |
| 7                      | মনি    | অফিস                                                                              | মনি                                                                                   |
| 8                      | মানিক  | অফিস                                                                              |  |
| 9                      | রবিয়া | অফিস                                                                              | রবিয়া                                                                                |
| 10                     | রিমান  | অফিস                                                                              |  |
|                        |        |                                                                                   |                                                                                       |
|                        |        |                                                                                   |                                                                                       |
|                        |        |                                                                                   |                                                                                       |
|                        |        |                                                                                   |                                                                                       |

Page 1 of 5

**L&T CONSTRUCTION  
POWER TRANSMISSION & DISTRIBUTION IC**

Issue 2-Rev 0

Ref.: IM-7.2-A1

**EHS/Induction Training Attendance Sheet for project sites/Factories**

Name of the Project/Factories: 132/230 KV App. BU/Segment/Cluster: TC/C/ Bangladesh,

Training Imparted by: Anoop AT

Date &amp; Location: 16/11/2024,

Topics: Evolution SOP/

| SL No. | Name           | Designation | Category/Dept. | Signature |
|--------|----------------|-------------|----------------|-----------|
| 1      | Saim Saim.     | Helper      | AME.           |           |
| 2      | Shahabul Alam  | "           |                | Shahabul  |
| 3      | Shaha Alam     | Fitter      | "              |           |
| 4      | Nahid ulom     | Fitter      |                | Nahid     |
| 5      | Mahabul Alam   | "           |                |           |
| 6      | Raidul Islam   | Helper      |                | Ridul     |
| 7      | Sanchay.       | "           |                |           |
| 8      | Md. Faysal     | "           |                |           |
| 9      | Masum Ali      | "           |                |           |
| 10     | Torikul Islam  | W.O.        |                |           |
| 11     | Sabbir Hossain | Fitter      |                |           |
| 12     | Emon Hossain   | "           |                | Emam      |
| 13     | Abdul Hossain  | "           |                | 21/11     |
| 14     | Shakil Ali     | Helper      |                | Sakil     |
| 15     | Ashik PIC      | DWM.        |                |           |

  
Signature: Course Coordinator (HOD-EHSD / BU OR SEGMENT EHS HEAD /EHSC/MEHSO/FEHSM)

\*\* Category/Dept. - Staff Role/ Name of Sub-contractor/ Name of organization of visitor

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**L&T CONSTRUCTION  
POWER TRANSMISSION & DISTRIBUTION IC**

**Issue 2-Rev 0**

Ref.: IM-7.2-A1

**EHS/Induction Training Attendance Sheet for project sites/Factories**

Name of the Project/Factories: ADB-3 Project

BU/Segment/Cluster:

Training Imparted by: Anoop. AT

Date & Location: 20.11.24

Topics: Erection Sop

| Sl. No. | Name             | Designation | Category/Dept. | Signature  |
|---------|------------------|-------------|----------------|------------|
| 1       | FUNUS MIAH       | Helper      | RP-Traders     | ইউনুছিয়া  |
| 2       | FAHIM RAHMAN     | II          | II             | ফাহিম      |
| 3       | MOYNUDDIN        | II          | II             |            |
| 4       | HABIBUR RAHMAN   | II          | II             | হাবিবুর    |
| 5       | RIAD MIAH        | II          | II             | রিয়াহ     |
| 6       | BR MONU MIAH     | II          | II             | মুনু       |
| 7       | TARAK MIAH       | II          | II             | তরেক মিয়া |
| 8       | SADUL ISLAM      | II          | II             | সাদুল      |
| 9       | HAFIZUR RAHMAN   | II          | II             | হাফিজুর    |
| 10      | ARFIN ISLAM      | II          | II             | আরফিন      |
| 11      | MD. Sobuz Sheikh | II          | II             | সবুজ       |
| 12      | MD. SHAD SHEIKH  | II          | II             | শাদ শেখ    |
| 13      | MARUF HASAN      | II          | II             | মারুফ      |
| 14      | MD. ALAMIN       | II          | II             | আলমিন      |
| 15      |                  |             |                |            |

Signature: Course Coordinator (HOD-EHSD / BU OR SEGMENT EHS HEAD /EHSC/MEHSO/FEHSM)

\*\* Category/Dept. - Staff Role/ Name of Sub-contractor/ Name of organization of visitor

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|                                                                                   |                                     |  |
|-----------------------------------------------------------------------------------|-------------------------------------|--|
|  | <b>Training Participants Report</b> |  |
|                                                                                   |                                     |  |

- 1) Venues: - 9/6  
 2) Date of Training: - 11/12/24 Time: From 8 AM To 4 PM  
 3) Details of Training / Awareness: - Tool inspection of tools.  
 4) Training by: - A.K. Mahanta  
 5) Topic / Subject covered (in Point): - Tools inspection

Pre-inspection: - Recheck tool manuals. Visual inspection: - Check for damage. (i) inspect handle & grips. (ii) verify tool marking.

Functional inspection: - Test tool operation (iii) Check for proper lubricant. (iv) verify tool setting.

Safety inspection: - Check the safety guard (v) inspect electrical component (vi) verify warning labels.

| Sr. No. | Name of the Participant (Staff/Worker) | Designation | Signature/Thumb | Remark |
|---------|----------------------------------------|-------------|-----------------|--------|
| 1.      | ms. Rakbul.                            | area leader | Rakbul          |        |
|         | ms. Ramjan                             | fitter      | Ramjan          |        |
|         | ms. Morsedul                           | fitter      | Morsedul        |        |
|         | ms. Rifon                              | fitter      | Rifon           |        |
|         | md. Anower                             | fitter      | Anower          |        |
|         | ms. Easin                              | labour      | Easin           |        |
|         | md. Abu Sayed                          | labour      | Abu Sayed       |        |
|         | md. Habib                              | Helper      | Habib           |        |
|         | md. Sohed                              | labour      | Sohed           |        |
|         | md. Soton                              | labour      | Soton           |        |

For Training Lighting Ltd  
 A.K. Mahanta  
 Sr. Field Engineer

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|                                                                                   |                                     |  |
|-----------------------------------------------------------------------------------|-------------------------------------|--|
|  | <b>Training Participants Report</b> |  |
|                                                                                   |                                     |  |

- 1) Venue: - G/B
- 2) Date of Training: - 02/12/24 Time: From 8:30 To 9:45 Am.
- 3) Details of Training / Awareness: Manually material shifting
- 4) Training by: - K.K. Mahanta.
- 5) Topic / Subject covered (in Point) 1. Wear proper PPE (II) Assess the Load of the material to be.
- (III) Clear the area of obstacles (IV) LIFTING TECHNIQUES
- (I) Bend at the knees.
- (II) Keep the Load close.
- (III) Lifting slowly & smoothly.
- (IV) Placed the material carefully.
- (V) Avoid over reaching.
- (VI) Take Regular break.
- (VII) Clean the area.
- (VIII) Report any incidents.

| Sr. No. | Name of the Participant (Staff/Worker) | Designation | Signature/Thumb | Remark |
|---------|----------------------------------------|-------------|-----------------|--------|
| 1.      | md. mokbul                             | Team leader | [Signature]     |        |
| 2.      | md. Romjan                             | fitter      | [Signature]     |        |
| 3.      | md. mersedul                           | fitter      | [Signature]     |        |
| 4.      | md. Ripon                              | fitter      | [Signature]     |        |
| 5.      | md. Anower                             | fitter      | [Signature]     |        |
| 6.      | md. Easin                              | labour      | [Signature]     |        |
| 7.      | md. Abu Sayeed                         | labour      | [Signature]     |        |
| 8.      | md. Habib                              | Helper      | [Signature]     |        |
| 9.      | md. Sahed                              | labour      | [Signature]     |        |
| 10.     | md. Sayan                              | labour      | [Signature]     |        |

For Transrail Lighting Ltd.  
K.K. Mahanta  
HSE Engineer

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|                                                                                                                                     |                                     |  |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--|
| <br><b>TRANSRAIL</b><br>Transrail Lighting Limited | <b>Training Participants Report</b> |  |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--|

1) Venue: - 5/0

2) Date of Training: - 16/11/24 Time: From 9:00 To 10:00

3) Details of Training / Awareness: - Safety Tips during snake bite.

4) Training by: - K.K. Mahanta

5) Topic / Subject covered (In Point):

Immediate Response: Remain calm, move away from the snake, remove constricting items.

First Aid: Do not attempt to suck out the venom. Do not apply a tourniquet. Do not apply ice & heat. Do not clean the wound with soap & water.

Medical attention: Seek medical attention immediately. Follow medical instructions.

Prevention: Wear protective gear. Stay on marked tracks. Avoid stepping on to date & hidden area. Do not touch & hand to snake.

| Sr. No. | Name of the Participant (Staff/Worker) | Designation | Signature/Thumb | Remark |
|---------|----------------------------------------|-------------|-----------------|--------|
| 1.      | MD. MAKBUL                             | Team Leader | [Signature]     |        |
| 2.      | MD. ROMJAN                             | Fitter      | [Signature]     |        |
| 3.      | MD. MORBEDUL                           | Fitter      | [Signature]     |        |
| 4.      | MD. ROBON                              | Fitter      | [Signature]     |        |
| 5.      | MD. AMOWER                             | Fitter      | [Signature]     |        |
| 6.      | MD. EASEN                              | Labour      | [Signature]     |        |
| 7.      | MD. ABUSAYED                           | Labour      | [Signature]     |        |
| 8.      | MD. HABIB                              | Helper      | [Signature]     |        |
| 9.      | MD. SAHEB                              | Labour      | [Signature]     |        |
| 10.     | MD. SAYAN                              | Labour      | [Signature]     |        |

  
 For Transrail Lighting Ltd  
 Kishor Kumar Mahanta  
 Deputy Engineer

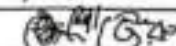
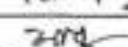
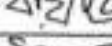
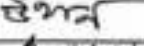
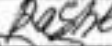
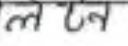
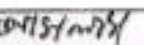


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|                                                                                                                 |                                     |  |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------|--|
| <br>Transrail Lighting Limited | <b>Training Participants Report</b> |  |
|                                                                                                                 |                                     |  |

- 1) Venue: - Loc: JO/O
- 2) Date of Training: - 15-12-2024 Time: From 9:00 AM to 10:30 AM.
- 3) Details of Training / Awareness: - HIV (Human Immunodeficiency virus)
- 4) Training by: - Md. Tawar Molla.
- 5) Topic / Subject covered (in Point) HIV is a viral infection that attacks the body immune system. If left untreated HIV can lead to AIDS. Here are some key facts about HIV:
  - ① Transmission: HIV is primarily spread through unprotected sex sharing needles and mother-to-child Transmission during pregnancy, childbirth or breastfeeding.
  - ② Symptoms: Early symptoms may include fever

| Sr. No. | Name of the Participant (Staff/Worker) | Designation | Signature/Thumb                                                                      | Remark |
|---------|----------------------------------------|-------------|--------------------------------------------------------------------------------------|--------|
| 01      | Md. Sagor Molla                        | Fore-man    |   |        |
| 02      | Md. Mosir                              | L.m         |  |        |
| 03      | Md. Sabu                               | L.m         |  |        |
| 04      | Thandu                                 | H           |  |        |
| 05      | Darid                                  | H           |  |        |
| 06      | Uham                                   | H           |  |        |
| 07      | Rasel                                  | L.m         |  |        |
| 08      | Liton                                  | H           |  |        |
| 09      | Akram                                  | L.m         |  |        |
| 10      | Zihad                                  | H           |  |        |

  
HSE Officer / Engineer

  
Project Manager

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|                                                                                                                 |                                     |  |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------|--|
| <br>Transrail Lighting Limited | <b>Training Participants Report</b> |  |
|                                                                                                                 |                                     |  |

- 1) Venue: - 05/0 to 10/0  
 2) Date of Training: - 05-12-2024 Time: From 10:00 AM To 02:00 PM.  
 3) Details of Training / Awareness: - public Annouement for stringing work  
 4) Training by: - Md. Tushar molla.  
 5) Topic / Subject covered (In Point)

Before Commencing Stringing work AS we prepare to start stringing work please be advised that mixing public Annouement will be conducted near public places and villages to inform residents of the upcoming work. the purpose of these Annouement is for ① inform the public of the stringing work schedule ② advise on necessary safety precautions. ③ minimize disruptions to daily activities.

| Sr. No. | Name of the Participant (Staff/Worker) | Designation | Signature/Thumb | Remark |
|---------|----------------------------------------|-------------|-----------------|--------|
| 01      | Md. Shashil                            | foreman     | Shashil         |        |
| 02      | Shakib                                 | Lam         | শাকিব           |        |
| 03      | Ejazul                                 | Lam         | Ejazul          |        |
| 04      | Samrat                                 | Lam         | সামরাত          |        |
| 05      | Shamim                                 | Lam         | শামিম           |        |
| 06      | Arman                                  | Lam         | আব্দুল মান্নান  |        |
| 07      | Rasel                                  | Lam         | Rasel bial      |        |
| 08      | Rakib                                  | Lam         | রাকিব           |        |
| 09      | Rakib-2                                | Lam         | Rakib bial      |        |
| 10      | Roni.                                  | Lam         | রনি             |        |

Tushar  
HSE Officer / Engineer

Dim  
Project Manager

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|                                                                                                                 |                                     |  |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------|--|
| <br>Transrail Lighting Limited | <b>Training Participants Report</b> |  |
|                                                                                                                 |                                     |  |

- 1) Venue: - Loc: 1/1.
- 2) Date of Trainings: - 25.02.2024 Time: From 10:00 AM To 11:30 AM
- 3) Details of Training / Awareness: - Lockout/Tagout (LOTO) procedure.
- 4) Training by: - Md. Tareq
- 5) Topic / Subject covered (In Point) purpose: To ensure the safety of personnel during maintenance, repair and servicing of equipments.
- # Scope: - This procedure applies to all personnel involved in maintenance, repair and servicing of equipment.
- # Responsibilities:
- ① Ensure that all equipments are properly shut down.
- ② Apply safe device to prevent unexpected startup or release of stored energy

| Sr. No. | Name of the Participant (Staff/Worker) | Designation | Signature/Thumb | Remark |
|---------|----------------------------------------|-------------|-----------------|--------|
| 01      | md. Akram                              | F.M         | MD: AKRAM       |        |
| 02      | shyeed                                 | D.M         | SHYEED          |        |
| 03      | sayor                                  | L.M         | সায়র           |        |
| 04      | Ronit                                  | L.M         | রুনি            |        |
| 05      | Haseem                                 | L.M         | হাসিম           |        |
| 06      | Shoriful                               | L.M         | শরীফুল          |        |
| 07      | salek                                  | H           | সালেক           |        |
| 08      | sabbir                                 | H           | সাব্বির         |        |
| 09      | salman                                 | L.M         | সালমান          |        |
| 10      | polashu                                | H           | পলাশ            |        |

  
HSE Officer / Engineer

  
Project Manager

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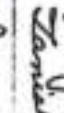
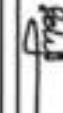
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## TRAINING WORKSHOP ON ENVIRONMENTAL &amp; SOCIAL SAFEGUARD MONITORING

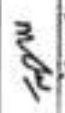
Venue: PGCB Head Office

Attendance Sheet

Date: 28<sup>th</sup> August 2024

| Sl. | Name              | Organization | Designation              | Cell No.     | Signature                                                                            |
|-----|-------------------|--------------|--------------------------|--------------|--------------------------------------------------------------------------------------|
| 1.  | Md. Jalid Hossain | PGCB         | DDP                      | 01755677438  |  |
| 2.  |                   |              |                          |              |                                                                                      |
| 3.  |                   |              |                          |              |                                                                                      |
| 4.  | MD. Long Islam    | Power Grid   | Assistant Engineer       | 01716458255  |   |
| 5.  | Shawn Ahsan       | TBEA         | Project Manager          | 0712605090   |   |
| 6.  | Yunguo            | TBEA         | Material Manager         | 0184050992   |   |
| 7.  | Deepshyaman       | TBEA         | HSE Manager              | 01325841533  |   |
| 8.  | Tabassum Hasan    | Power Grid   | Assistant Engineer       | 01769458708  |   |
| 9.  | Anam Akram        | Habtek       | Environmental Consultant | 01953335570  |   |
| 10. | Shahina Akter     | Power Grid   | S.D.E                    | 017133250303 |   |
| 11. | Sohel Rana        | CEI          | Design Engineer          | 01793883896  |   |

EQMS

| SL  | Name                           | Organization | Designation    | Cell No.     | Signature                                                                             |
|-----|--------------------------------|--------------|----------------|--------------|---------------------------------------------------------------------------------------|
| 12. | Am Yang                        | CT           | Chief Engineer | 01923219963  |  |
| 13. | Isa Ahmed                      | CE T         | AE             | 01533981614  |  |
| 14. | Masud                          | CE T         | AE             | 01722-529149 |  |
| 15. | Md. Farquezaan                 | ROB PLC      | GEN (ATC)      | 01713850348  |   |
| 16. | Sumon Chandra Roy              | POB PLC      | AM (ESU)       | 01609056114  |    |
| 17. | Kazi Md. Akil Anwar Ahmed      | POB PLC      | AM (ESU)       | 01521-439592 |    |
| 18. | Nasim Ghani                    | Power Grid   | Manager (ESU)  | 01709997865  |    |
| 19. | Md. Akil Sabir Siddique (Amir) | Power Grid   | DM             | 01711112272  |    |
| 20. | Md. Rakib Hossain              | Hambock      | Manager        | 01716-334118 |    |

EQMS

## Annexure-18: Community Engagement



Gopalganj Shibchar TL (Package 4)



Satkhira Manirampur TL (Package 3)



Bagerhat- Pirojpur- Bhandaria TL (Package 4)

### Training Details

[https://drive.google.com/file/d/1nY0OJZDjPKQqghlKA\\_Nsw1y7frwcqDOE/view?usp=sharing](https://drive.google.com/file/d/1nY0OJZDjPKQqghlKA_Nsw1y7frwcqDOE/view?usp=sharing)

## Annexure-19: Photos of Switchyards of Existing Substations

<https://drive.google.com/drive/folders/1gd64IIY603Y3jj0QRSsXLAtnYtoxyNyP?usp=sharing>

## Annexure-20: EMP Clause of Packages-7 and 8

### 47. Environmental Management Plan

The Contractor shall comply with all applicable national, provincial and local environmental laws and regulations.

The Contractor shall (a) establish an operational system for managing environmental impacts, (b) carry out all of the monitoring and mitigation measures set forth in the [Initial Environmental Examination ("IEE")] or [Environmental Management Plan ("EMP")] and (c) allocate the budget required to ensure that such measures are carried out. The Contractor shall submit semi-annual reports on the carrying out of such measures to the Employer.

More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the initial environmental examination and the environmental management plan attached

Design, Supply, Installation, Testing and Commissioning of 230/22 kV (S/S) Substation at Dhaka and 132/33 kV (S/S) Substations at Doria, Hattahat, Shatkhira, Bhanga, Jharkhat, Project on Turkey Road (Package-6)



Section 8: Special Conditions of Contract

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hereto as Appendix (2.2) and (i) any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor implementation of the initial environmental examination and the environmental management plan.

The Contractor shall allocate a budget for compliance with these measures, requirements and actions."

Appendix to SCC will be provided (in PDF form) with the bidding document:

1. Resettlement Plan (RP)
2. Initial Environment Examination (IEE)
3. Environment Management Plan (EMP)
4. Corrective Action Plan (CAP)

## 47. Environmental Management Plan

The Contractor shall comply with all applicable national, provincial and local environmental laws and regulations.

The Contractor shall (a) establish an operational system for managing environmental impacts, (b) carry out all of the monitoring and mitigation measures set forth in the [Initial Environmental Examination ("IEE")] or [Environmental Management Plan ("EMP")] and (c) allocate the budget required to ensure that such measures are carried out. The Contractor shall submit semi-annual reports on the carrying out of such measures to the Employer.

More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the initial environmental examination and the environmental management plan attached hereto as Appendix [2.3]; and (ii) any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor implementation of the initial environmental examination and the environmental management plan.

The Contractor shall allocate a budget for compliance with these measures, requirements and actions."

Appendix to SCC will be provided (in PDF form) with the bidding document:

1. Resettlement Plan (RP)
2. Initial Environment Examination (IEE)
3. Environment Management Plan (EMP)
4. Corrective Action Plan (CAP)





**L&T CONSTRUCTION**  
**POWER TRANSMISSION & DISTRIBUTION IC**  
**MONTHLY WASTE GENERATION REPORT**

| Project 132 KV, 230 KV ADB-3 Project |                               |      |                          |        | Document No: - ADB-3 -07 |          |                              |  |
|--------------------------------------|-------------------------------|------|--------------------------|--------|--------------------------|----------|------------------------------|--|
| Month: Dec -24                       |                               |      | Package: 03              |        | Date: -                  |          |                              |  |
| S/N                                  | Waste Generation Type         | Unit | Generation for the month | Reused | Recycled                 | Disposed | Remarks (disposed by TP/Own) |  |
| <b>1. Non-Hazardous Waste</b>        |                               |      |                          |        |                          |          |                              |  |
| <b>A. General Waste</b>              |                               |      |                          |        |                          |          |                              |  |
| I.                                   | Hand Gloves                   | Pair | 1020                     | 800    | 800                      | 220      | Own                          |  |
| II.                                  | PP rope                       | Kg   | 100                      | 80     | 0                        | 20       | TP                           |  |
| III.                                 | Safety Helmet                 | Nos  | 130                      | 130    | 0                        | 0        |                              |  |
| IV.                                  | Safety Shoes                  | Pair | 130                      | 0      | 130                      | 0        |                              |  |
| V.                                   | Cartoon Box                   | Kg   | 30                       | 0      | 0                        | 30       | TP                           |  |
| VI.                                  | Safety Harness                | Nos  | 43                       | 43     | 0                        | 0        |                              |  |
| <b>B. Materials Waste</b>            |                               |      |                          |        |                          |          |                              |  |
| I.                                   | Conductor Bits                | Kg   | 0                        | 0      | 0                        | 0        |                              |  |
| II.                                  | Steel                         | Ton  | 131                      | 33     | 21                       | 12       | TP                           |  |
| III.                                 | Other Metals                  | Kg   | 0                        | 0      | 0                        | 0        |                              |  |
| C.                                   | Wood Waste                    | Kg   | 60                       |        |                          |          |                              |  |
| D.                                   | Food Waste                    | Kg   | 100                      | 0      | 0                        | 100      | Own                          |  |
| E.                                   | Paper Waste                   | Kg   | 120                      | 10     | 0                        | 110      | own                          |  |
| F.                                   | Packing Materials             | Kg   | 60                       |        |                          | 60       | TP                           |  |
| G.                                   | Other Non-Hazardous materials | Kg   | 0                        |        |                          |          |                              |  |
| <b>2. Hazardous Waste</b>            |                               |      |                          |        |                          |          |                              |  |
| A.                                   | Paints                        | Ltr  | 20                       | 20     | 0                        | 0        |                              |  |
| B.                                   | Lubricants oil                | Ltr  | 0                        | 0      | 0                        | 0        |                              |  |
| C.                                   | Plastic waste                 | Kg   | 30                       |        |                          | 30       | TP                           |  |
| D.                                   | Cement bags                   | Nos  | 1200                     |        |                          | 1200     | TP                           |  |
| E.                                   | Printing cartridges           | Nos  | 3                        |        |                          | 3        | Own                          |  |
| F.                                   |                               |      | 0                        |        |                          |          |                              |  |

Sensitivity: LNT Construction Internal Use

**L&T CONSTRUCTION**  
**POWER TRANSMISSION & DISTRIBUTION IC**  
 MONTHLY WASTE GENERATION REPORT

| Project 132 KV, 230 KV ADB-3 Project   |                                          |             |                          |        | Document No: - ADB-3 -07 |          |                              |
|----------------------------------------|------------------------------------------|-------------|--------------------------|--------|--------------------------|----------|------------------------------|
| Month: Dec -24                         |                                          | Package: 03 |                          |        | Date: -                  |          |                              |
| Sl. No                                 | Waste Generation Type                    | Unit        | Generation for the month | Reused | Recycled                 | Disposed | Remarks (disposed by TP/Own) |
|                                        | E-Waste (Desktop,CPU,Printer&Mouse,etc.) | Nos         |                          |        |                          |          |                              |
| G                                      | Medical Waste                            | Kg          | 0                        |        |                          |          |                              |
| <b>3. Sewage Waste &amp;Wastewater</b> |                                          |             |                          |        |                          |          |                              |
| A                                      | Treated sewage wastewater                | Ltr         | 120                      | 0      | 0                        | 120      | TP                           |
| B                                      | Sewage Sludge                            | Ltr         | 120                      | 0      | 0                        | 120      | TP                           |
| C                                      | Wastewater                               | Ltr         | 150                      | 0      | 0                        | 150      | TP                           |



Sensitivity: LNT Construction Internal Use

## Package 4

| TRANSRAIL                                 |                                                          | TRANSRAIL LIGHTING LIMITED |                                 |        |                                          |          |                             |
|-------------------------------------------|----------------------------------------------------------|----------------------------|---------------------------------|--------|------------------------------------------|----------|-----------------------------|
| MONTHLY WASTE GENERATION REPORT - PROJECT |                                                          |                            |                                 |        |                                          |          |                             |
| Project Name: -G-479                      |                                                          |                            |                                 |        | Format No.: Transrail/Const./HSE/WMS/023 |          |                             |
| Month: ____ DEC ____ 2024                 |                                                          |                            |                                 |        | Rev. No: 01<br>Date: 13.09.2019          |          |                             |
| Sr. No.                                   | Waste Generation Type                                    | Unit                       | Generation for the Month (Qty.) | Reused | Recycled                                 | Disposed | Remarks (Dispose by TP/own) |
| <b>1. Non - Hazardous Waste</b>           |                                                          |                            |                                 |        |                                          |          |                             |
| <b>a. General Waste</b>                   |                                                          |                            |                                 |        |                                          |          |                             |
| i                                         | Hand Gloves                                              | Pairs                      | 36                              |        |                                          | 36       |                             |
| ii                                        | PP Ropes                                                 | Kg                         | 0                               |        |                                          |          |                             |
| iii                                       | Safety Helmet                                            | No.s                       | 20                              |        | 20                                       | 5        |                             |
| iv                                        | Safety Shoes                                             | Pairs                      | 30                              |        |                                          | 4        |                             |
| v                                         | Cartoon Boxes                                            | Kg                         | 0                               |        |                                          |          |                             |
| vi                                        | Safety Harness                                           | No.s                       | 0                               |        |                                          |          |                             |
| <b>b. Metal Waste</b>                     |                                                          |                            |                                 |        |                                          |          |                             |
| i                                         | Conductor Bits                                           | Kg                         | 0                               |        |                                          |          |                             |
| ii                                        | Steel                                                    | TON                        | 0                               |        |                                          |          |                             |
| iii                                       | Other Metals " _____ "                                   | Kg                         | 0                               |        |                                          |          |                             |
| c                                         | Wood Waste                                               | Kg                         | 0                               |        |                                          |          |                             |
| d                                         | Food Waste                                               | Kg                         | 0                               |        |                                          |          |                             |
| e                                         | Paper Waste                                              | Kg                         | 5                               | 5      |                                          |          |                             |
| f                                         | Mixed Construction Waste                                 | Kg                         | 0                               |        |                                          |          |                             |
| g                                         | Packing Material (Like - Conductor Drum/Insulator/Other) | Kg                         | 0                               |        |                                          |          |                             |
| h                                         | Other Non-Hazardous Waste " _____ "                      | Kg                         | 0                               |        |                                          |          |                             |
| <b>2. Hazardous Waste</b>                 |                                                          |                            |                                 |        |                                          |          |                             |
| i                                         | Paints Residues                                          | Kg                         | 0                               |        |                                          |          |                             |
| ii                                        | Adhesives and Sealants (Silicon Gel)                     | Ltr.                       | 0                               |        |                                          |          |                             |
| iii                                       | Lubricants (Used Oil)                                    | Ltr.                       | 0                               |        |                                          |          |                             |
| iv                                        | Solvents (Thinner, Spirit, Acetone)                      | Ltr.                       | 0                               |        |                                          |          |                             |

|                                                                                                                                                                                                                                                                                                   |                                                                       |         |     |     |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------|-----|-----|--|--|--|
| v                                                                                                                                                                                                                                                                                                 | Batteries                                                             | No<br>s | 0   |     |  |  |  |
| vi                                                                                                                                                                                                                                                                                                | Oil Filters                                                           | Kg      | 0   |     |  |  |  |
| vii                                                                                                                                                                                                                                                                                               | Plastic Waste                                                         | Kg      | 0   |     |  |  |  |
| viii                                                                                                                                                                                                                                                                                              | Cement Bags                                                           | No<br>s | 500 | 500 |  |  |  |
| ix                                                                                                                                                                                                                                                                                                | Used Blasting Adhesive "____"                                         | ton     | 0   |     |  |  |  |
| x                                                                                                                                                                                                                                                                                                 | Used Paint Tins                                                       | Kg      | 0   |     |  |  |  |
| xi                                                                                                                                                                                                                                                                                                | Printing Cartridges                                                   | No<br>s | 4   | 4   |  |  |  |
| xii                                                                                                                                                                                                                                                                                               | Used absorbents (Oily rags/ Oily cotton)                              | Kg      | 0   |     |  |  |  |
| xiii                                                                                                                                                                                                                                                                                              | E-Waste (Desktop, CPU, Printer, Mouse, Cables, Fluorescent Bibs etc.) | Kg      | 0   |     |  |  |  |
| xiv                                                                                                                                                                                                                                                                                               | Medical waste                                                         | Kg      | 0   |     |  |  |  |
| <b>3. Sewage Waste &amp; Waste water</b>                                                                                                                                                                                                                                                          |                                                                       |         |     |     |  |  |  |
| a                                                                                                                                                                                                                                                                                                 | Treated Sewage Waste Water                                            | Ltr.    |     |     |  |  |  |
| b                                                                                                                                                                                                                                                                                                 | Sewage Sludge                                                         | Ltr.    |     |     |  |  |  |
| c                                                                                                                                                                                                                                                                                                 | Waste Water (Civil Project)                                           | Ltr.    |     |     |  |  |  |
| <p><b>Note: 1. This data should be reached on or before 7th of every month at HO - HSE Dept. (If not applicable, then mark-NA)</b></p> <p><b>2. Data to be maintained by Plant/Project store person with the help of Safety/ respective HOD &amp; monitoring by Project/Plant HSE Person.</b></p> |                                                                       |         |     |     |  |  |  |

For Signature/Stamp  
  
 Rabwana Khatun, Manager  
 O&M HSE Engineer

Annexure-22: Safety Signs at Site



Annexure-23: Status of CAP



|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Purbasadipur (Package 4)                                                           | Satkhira Manirampur TL (Package 3)                                                  |
|   |   |
| Kaliganj Maheshpur TL (Package 3)                                                  | Satkhira Rupsha TL (Package 3)                                                      |
| ID cards of the designated workers in Package 3 and Package 4                      |                                                                                     |
|  |  |
| Rupsha Substation (Package 7)                                                      | Phultola Substation (Package 7)                                                     |



Manirampur Substation (Package 7)



Domar Hatibandha TL Location (Package 4)



Nilphamari Store (Package 4)

Grievance Box at Construction Site



Purbasadipur Domar TL(Package 4)

Training before work for capacity building of the workers



Capacity Building Workshop for Contractors and PIU



Satkhira Rupsha TL (Package 3)



Purba Sadipur- Domar (Package 4)

Secondary Container for Oil Spillage Prevention

## Annexure-24: Pre-Work Briefing



Rampura Bashundhara Under ground cable line (Package 2)



Kushtia Meherpur TL (Package 3)



Kaliganj Maheshpur TL (Package 3)



Domar Hatibandha TL (Package 4)



Gopalganj Shibchar TL (Package 3)

## Annexure- 25: Clearance from BIWTA for River Crossing

[https://drive.google.com/drive/folders/10RVE4woW-0QahmNMEURNXlaSFYPt04wy?usp=drive\\_link](https://drive.google.com/drive/folders/10RVE4woW-0QahmNMEURNXlaSFYPt04wy?usp=drive_link)

## Annexure- 26: Crops Rate from Agricultural Office

[https://drive.google.com/drive/folders/1V49CNRxW2XRu\\_XbxRuHtYvFPSMUOiutT?usp=drive\\_link](https://drive.google.com/drive/folders/1V49CNRxW2XRu_XbxRuHtYvFPSMUOiutT?usp=drive_link)

## Annexure- 27: Health and safety Checklist

### Safety Checklist for Erection Work at Package 3

#### L&T CONSTRUCTION POWER TRANSMISSION & DISTRIBUTION IC

#### L&T CONSTRUCTION POWER TRANSMISSION & DISTRIBUTION IC

#### TOWER ERECTION CHECKLIST

LOCATION NO:- 3/7 TYPE OF TOWER:- 1D2+1.5M

| SL NO | Document Name      | Verified |
|-------|--------------------|----------|
| 1     | Height work permit | ✓        |
| 2     | PPE Checklist      | ✓        |
| 3     | Erection Checklist | ✓        |
| 4     | FBH Checklist      | ✓        |
| 5     | Erection Checklist | ✓        |
| 6     | Tools Checklist    | ✓        |
| 7     |                    |          |

#### EMERGENCY CONTACT DETAILS

| SL NO | DETAILS          | PHONE NUMBER |
|-------|------------------|--------------|
| 1     |                  |              |
| 2     |                  |              |
| 3     |                  |              |
| 4     |                  |              |
| 5     | Emergency number | 999          |
|       |                  |              |
|       |                  |              |

**L&T CONSTRUCTION  
POWER TRANSMISSION & DISTRIBUTION**

Name of Site: ADB Pkg-3 EHS CHECKLIST FOR ERECTION Location No: 3/7132KL Date: 13.07.24

| SL NO | DESCRIPTION                                                                                                                                                                                                                                                                                                                                   | OBSERVATION |    | REMARKS |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----|---------|
|       |                                                                                                                                                                                                                                                                                                                                               | YES         | NO |         |
| 1     | Whether tower erection is completed (নির্মিত গাছের স্পারের স্থিতিশীলতা)                                                                                                                                                                                                                                                                       | ✓           |    |         |
| 2     | Is foot pit box installation on site? (ফুট পিট বক্স স্থাপনের কাজের প্রস্তুতি)                                                                                                                                                                                                                                                                 | ✓           |    |         |
| 3     | Whether proper lock lifting is done and safe clearance is maintained from permanent structures, H&T lines. (সঠিক ব্লক লিফটিং সম্পন্ন হয়েছে কিনা এবং স্থায়ী কাঠামো, H&T লাইন থেকে নিরাপদ দূরত্ব বজায় রাখা হয়েছে কিনা)                                                                                                                      | ✓           |    |         |
| 4     | A guard with a red flag and whistle is deployed around the tower to avoid unintentional access to the work area. one person should be engaged for height work monitoring. (কম্পিউটার প্রকৃত্তিগতভাবে বর্তমান স্টেশন এলাকায় নিয়ন্ত্রণের ব্যবস্থা করা হয়েছে কিনা এবং একজন প্রকৃত্তিগতভাবে বর্তমান স্টেশন এলাকায় নিয়ন্ত্রণ করা হয়েছে কিনা) | ✓           |    |         |
| 5     | Whether proper communication system is established and communicated to the workers. (সঠিক যোগাযোগ ব্যবস্থা প্রতিষ্ঠিত হয়েছে কি না এবং কর্মীদের বুঝতে পেরেছে কিনা)                                                                                                                                                                            | ✓           |    |         |
| 6     | Whether life lines are provided in all four leg of tower and tied with stub of towers. (নির্দিষ্ট নিয়ন্ত্রণের মাধ্যমে লাইফ লাইন দেওয়া হয়েছে কিনা)                                                                                                                                                                                          | ✓           |    |         |
| 7     | Whether the tower has a height pass for working at height. (উচ্চতায় কাজ করার জন্য ফিটারের হাইট পাস আছে কিনা)                                                                                                                                                                                                                                 | ✓           |    |         |
| 8     | Whether the lifters have a rope grab type fall arrester and use a vent line attached to the feet when climbing and descending tower. (ফিটাররা রোপ গ্রাব টাইপ ফল অরেস্টার এবং ভেন্ট লাইন ব্যবহার করে উঠতে এবং নামতে পারেন কিনা)                                                                                                                | ✓           |    |         |
| 9     | Horizontal lifelines are provided with horizontal bracing. (সরুপের লাইনগুলি অনুপ্রস্থভাবে ব্র্যাকিং করা হয়েছে কিনা)                                                                                                                                                                                                                          |             | ✓  |         |
| 10    | Whether all main leg joints are properly tightened. (স্পারের প্রধান পায়ে সমস্ত জয়েন্ট সঠিকভাবে শক্ত করা হয়েছে কিনা)                                                                                                                                                                                                                        | ✓           |    |         |
| 11    | Whether all necessary plan bracing, hip bracing, diagonal etc. are fitted and fitted section was before move to next section erection. (সমস্ত প্রয়োজনীয় ব্র্যাকিং প্রদান করা হয়েছে কিনা এবং ব্র্যাকিং করা হয়েছে কিনা)                                                                                                                     | ✓           |    |         |
| 12    | Whether all tummy bars and spacers have taglines. And, nutbolts and washers are carried in the tool bag. (সব টম্মি বার এবং স্পারের ট্যাগলাইন আছে কিনা এবং নট বোল্ট এবং ওয়াশারস টুল ব্যাগে রাখা হয়েছে কিনা)                                                                                                                                  | ✓           |    |         |
| 13    | Whether any TMT tummy bars are available at the location. (অবস্থানে কোনো TMT টম্মি বার পাওয়া যায় কিনা)                                                                                                                                                                                                                                      | ✓           |    |         |
| 14    | Whether suitable tools and machines, ropes are being used and checked before starting work. (উপযুক্ত সরঞ্জাম এবং মেশিন, দড়ি ব্যবহার করা হচ্ছে কিনা এবং কাজ শুরু করার আগে পরীক্ষা করা হয়েছে কিনা)                                                                                                                                            | ✓           |    |         |
| 15    | Whether PP rope is used for lifting material. (পলিপ্রোপাইলিন দড়ি উপকরণ উত্তোলন করা ব্যবহার করা হয়েছে কিনা)                                                                                                                                                                                                                                  |             | ✓  |         |
| 16    | Come Along Clamp/Mechanical clamping alternative arrangements are used to hold the load until the tower section is installed at height. (কিছুটা উত্তোলন বা স্থাপনের সময় (যদিও খরচ করার জন্য সিউনিকেশন ক্লাম্প ব্যবহার করা হয়)                                                                                                               | ✓           |    |         |
| 17    | Singline rope protected against sharp edges. (সিংলাইন রোপে খরচের বিরুদ্ধে সুরক্ষিত)                                                                                                                                                                                                                                                           | ✓           |    |         |
| 18    | All anchorage points are secured and properly reinforced. (সব আঁকড়ের বিন্দু সুরক্ষিত এবং সঠিকভাবে শক্তিশালী করা হয়েছে কিনা)                                                                                                                                                                                                                 | ✓           |    |         |
| 19    | Are 4 nos guy sling support provided for gin pole. (গিন পোল জিয়ারে ৪টি গাই স্লিং সাপোর্ট প্রদান করা হয়েছে কিনা)                                                                                                                                                                                                                             | ✓           |    |         |
| 20    | Whether HT nut & bolt are in use for gin pole joints. (হাইট নট বোল্ট গিন পোল জয়েন্টের জন্য ব্যবহার করা হয়েছে কিনা)                                                                                                                                                                                                                          | ✓           |    |         |
| 21    | Are only single sheave pulley of Close type is used in height or not. (উচ্চতায় কি না শুধুমাত্র একটি ক্লো টাইপ শেভ পুলি ব্যবহার করা হয়েছে)                                                                                                                                                                                                   | ✓           |    |         |
| 22    | Whether all T&Ps have third party TC and have identification number or color coding. (সবকিছু T&P এর তৃতীয় পক্ষের TC আছে কিনা এবং সনাক্তকরণ নম্বর এবং রঙ (কোড) আছে কিনা)                                                                                                                                                                      | ✓           |    |         |
| 23    | Whether drinking water is available at workplace. (কম্পিউটারে পানীয় জলের ব্যবস্থা আছে কিনা)                                                                                                                                                                                                                                                  | ✓           |    |         |

Signature of Section incharge/Site Engineer (Site Supervisor): 

Signature of EHS/HS Supervisor:

Security L&T Construction/General Site



**L&T CONSTRUCTION**  
**POWER TRANSMISSION & DISTRIBUTION**  
**INSPECTION CHECKLIST FOR POWER TILER MACHINE**

Name of Project: ADB Pkg-3, Location No.: 3/2.132KL, Date: 13.07.24  
 Machine Identification No.: 01

| Sl. NO. | DESCRIPTION                                                                                                                                                                                                                                                                                  | OBSERVATION |    | Action taken status in case "NO" |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----|----------------------------------|
|         |                                                                                                                                                                                                                                                                                              | YES         | NO |                                  |
| 1       | Whether periodical maintenance is carried out & inspection tag is displayed? (পরিচালনা বোর্ডের নির্দেশনা অনুযায়ী করা হয়েছে এবং পরিদর্শন ট্যাগ প্রদর্শিত হয়েছে কিনা?)                                                                                                                      | ✓           |    |                                  |
| 2       | Whether the power tiler machine is tested by 3rd party & B/L defined & displayed on the machine? (পরিচালনা বোর্ডের নির্দেশনা অনুযায়ী পরীক্ষা করা হয়েছে এবং মেশিনে প্রদর্শন করা হয়েছে?)                                                                                                    | ✓           |    |                                  |
| 3       | Whether competent and authorized operator was identified for operation of power tiler machine? (পরিচালনা বোর্ডের নির্দেশনা অনুযায়ী অপারেটর চিহ্নিত করা হয়েছে কিনা?)                                                                                                                        | ✓           |    |                                  |
| 4       | Whether the power tiler machine rotatory parts are guarded? (পরিচালনা বোর্ডের নির্দেশনা অনুযায়ী রোটরী অংশ সুরক্ষিত করা হয়েছে কিনা?)                                                                                                                                                        | ✓           |    |                                  |
| 5       | Whether the belt of power tiler machine was free from defect? (পরিচালনা বোর্ডের নির্দেশনা অনুযায়ী বেল্ট ত্রুটি মুক্ত ছিল কিনা?)                                                                                                                                                             | ✓           |    |                                  |
| 6       | Whether the belt of power tiler machine was not looser? (পরিচালনা বোর্ডের নির্দেশনা অনুযায়ী বেল্ট অলস ছিল কিনা?)                                                                                                                                                                            |             | ✓  |                                  |
| 7       | Whether the condition of drum lock to arrest anticlock movement is checked and free from defect? (clock the condition of spring) used for locking arrangement) (অ্যান্টি ক্লক মোবাইল আটকানোর জন্য স্প্রিং ব্যবহার করা হয়েছে এবং ত্রুটি মুক্ত কিনা? (লকিং ব্যবস্থা সঠিকভাবে কাজ করছে কিনা?)) | ✓           |    |                                  |
| 8       | Whether the anchor plate is free from defect and crack in welding? (আইচিও স্ট্যান্ডার্ড অনুযায়ী এবং ফ্রিক্রাক ফ্রি কিনা?)                                                                                                                                                                   | ✓           |    |                                  |
| 9       | Whether the condition of pinion & teeth is free from defect & damage? (পিনিয়ন ও টিথের অবস্থা ত্রুটি ও ক্ষতি মুক্ত কিনা?)                                                                                                                                                                    | ✓           |    |                                  |
| 10      | Whether the power tiler machine have adequate fuel for operation? (পরিচালনা বোর্ডের নির্দেশনা অনুযায়ী যথেষ্ট জ্বালানী আছে কিনা?)                                                                                                                                                            | ✓           |    |                                  |
| 11      | Whether the dip tray was provided to collect waste oils and to avoid soil contamination? (বর্জ্য তেল সংগ্রহ এবং মাটি দূষণ এড়াতে ডিপ ট্রে দেওয়া হয়েছে কিনা?)                                                                                                                               |             | ✓  |                                  |
| 12      | Whether the two crow bar system was installed behind the drum of power tiler machine to coil the wire rope while lifting material? (পরিচালনা বোর্ডের নির্দেশনা অনুযায়ী দুই ক্রো বার সিস্টেম ইনস্টল করা হয়েছে কিনা?)                                                                        | ✓           |    |                                  |
| 13      | Whether the power tiler machine is anchored with marshy anchor and additional anchorage support provide in case of muddy or loose soil? (কম্প্রিমিস্ট অ্যান্টি মার্শি অ্যান্টি প্যাওয়ার বোর্ডের নির্দেশনা অনুযায়ী নোডেল প্রদান করা হয়েছে কিনা?)                                           | ✓           |    |                                  |
| 14      | Whether the power tiler machine is with proper exhaust pipe? (পরিচালনা বোর্ডের নির্দেশনা অনুযায়ী সঠিক নিষ্কাশন পাইপ দেওয়া হয়েছে কিনা?)                                                                                                                                                    | ✓           |    |                                  |

Signature of Section Incharge/Site-Engineer/Site Supervisor:

Signature of EHS/EMS Supervisor:

Sensitivity of Environmental Impact

CS CamScanner

## Safety Checklist for Stringing Work at Package 3

**L&T CONSTRUCTION**  
**POWER TRANSMISSION & DISTRIBUTION IC**

**Issue 2-Rev 02**

PTW No. DDMMYY/ Job Code/ SI No. Ref: IM- 8.1.2.3-12

**PERMIT TO WORK AT HEIGHT FOR ERECTION & STRINGING IN TL PROJECTS**

Name of the Project ADD PK8-3 Job Code: \_\_\_\_\_

Work Location 3/2.132KV Activity: Tower Erection

Date: 13.07.24

Permit Period Required From 13.07.24 to 13.07.24

Name of the Sub-contractor: Sayem Engineering

| Risk Control measures to prevention of Person                                                                                                        | Yes                                                                                                             | No | N/A |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----|-----|
| 1. Height Workmen with Vertigo/ Empty Stomach/Fasting/ Sick are not allowed for working at Height.                                                   | ✓                                                                                                               |    |     |
| 2. Whether Safe access to work place is provided. (Ladder, Scaffold with Platform, Step bolt)                                                        | ✓                                                                                                               | ✓  |     |
| 3. Is the work area away from the vicinity of moving objects?                                                                                        | ✓                                                                                                               |    |     |
| 4. Whether All the workers have been explained safe work method.                                                                                     | ✓                                                                                                               |    |     |
| 5. Are the workmen screened and having height passes for working at height?                                                                          | ✓                                                                                                               |    |     |
| 6. Adequate fall protection arrangement made (Static line, Double Lanyard harness, Fall Arrestor, Safety Net)                                        | ✓                                                                                                               |    |     |
| 7. Whether Proper Fall Arrest system/ Fall Arrestor is deployed at critical work places.                                                             | ✓                                                                                                               |    |     |
| 8. Whether Area below the work place barricaded, especially underneath area.                                                                         | ✓                                                                                                               |    |     |
| <b>Risk Control measures for avoiding Fall/ Failure of Materials</b>                                                                                 |                                                                                                                 |    |     |
| 1. Are all tommy bar & Spanners were fixed with tag line along with height work fitters?                                                             | ✓                                                                                                               |    |     |
| 2. Whether all tools & tackles inspected before use.                                                                                                 | ✓                                                                                                               |    |     |
| 3. Whether hand tools and handing materials secured against accidental fall?                                                                         | ✓                                                                                                               |    |     |
| 4. Workmen provided with bag / box to carry bolt, nuts & hand tools.                                                                                 | ✓                                                                                                               |    |     |
| 5. Whether area below, where the height work being performed is cordoned and unauthorised entries are avoided.                                       | ✓                                                                                                               |    |     |
| 6. All lifting machines, tools & tackles (crane, winch machine, wire rope/ web sling, chain pulley block, etc.) are duly tested by competent person. | ✓                                                                                                               |    |     |
| Mention, if ANY other points applicable:                                                                                                             |                                                                                                                 |    |     |
| Permit Requested By:<br>(Site Supervisor/ Site Engineer)<br>Name: <u>BAKUN KUMAR</u><br>Designation: <u>Steward</u><br>Signature: <u>[Signature]</u> | Permit Issuing Authority:<br>(Section In-charge/CM/PM)<br>Name: _____<br>Designation: _____<br>Signature: _____ |    |     |
|                                                                                                                                                      | (EHSO)<br>Name: _____<br>Designation: _____<br>Signature: _____                                                 |    |     |

**Note:** Frontline supervisor of the gang performing the activity should have PTW copy with him. One copy should be retained by the issuing Authority. The permit is valid till the issue time, extension of permit may suitably obtain before expiry of permit. Once the activities are over work place shall be left safe.

**L&T CONSTRUCTION  
POWER TRANSMISSION & DISTRIBUTION IC**

Issue 2-Rev 01

PTW. No. DDMMYY/ Job Code/ SI No.

Ref: IM- 8.1.2.3-12

**DAILY RENEWAL OF PERMIT TO WORK AT HEIGHT IN TL PROJECTS**

| Date     | Activities performed | No. of workmen involved (in No's.) | Work Starting Time (in hrs.) | Remarks on Safety Compliance                              |        | Work Completion Time (in hrs.) |
|----------|----------------------|------------------------------------|------------------------------|-----------------------------------------------------------|--------|--------------------------------|
|          |                      |                                    |                              | Verified by EHS team/ Front line supervisor (Name & Sign) |        |                                |
| 15.07.24 | Erection             | 13                                 | 10.08AM                      | Name                                                      | Bartim | 06.44PM                        |
|          |                      |                                    |                              | Sign                                                      |        |                                |
| 15.07.24 | Erection             | 13                                 | 08.58                        | Name                                                      | Bartim | 06.56PM                        |
|          |                      |                                    |                              | Sign                                                      |        |                                |
| 16.07.29 | Erection             | 12                                 | 11.17AM                      | Name                                                      | Bartim | 09.30PM                        |
|          |                      |                                    |                              | Sign                                                      |        |                                |
|          |                      |                                    |                              | Name                                                      |        |                                |
|          |                      |                                    |                              | Sign                                                      |        |                                |
|          |                      |                                    |                              | Name                                                      |        |                                |
|          |                      |                                    |                              | Sign                                                      |        |                                |
|          |                      |                                    |                              | Name                                                      |        |                                |
|          |                      |                                    |                              | Sign                                                      |        |                                |

**Note:** Permit period shall be followed for one week, by conforming to Risk control measures adhered on daily basis. This work permit is valid for a working day of 12 hours. Daily renewal of work permit should be followed. This work permit must be suspended and re-issued; whenever an emergency occurs/ when the work plan deviates from the original plan/ after work scope changes/ when there is a change in the personnel involved.

Sensitivity: L&amp;T Construction Internal Use

Page 2 of 2

EAT TRANSMISSION  
POWER TRANSMISSION & DISTRIBUTION

Form 3 Rev 05  
9/7/1821Kv  
13.07.24

ITTS & Safety Gadgets Inspection Checklist

Name of the Project: **ADB-3** Job Title: **Sayon Frg.** By (Signature) / Date: **13.07.24**

Inspected by: **Barrun** S/N Number: **Sayon Frg.** Loc. Name (Specify Site Location / Area / Tower):

| Sl. No. | ITTS Description                                                                             | Quantity (In No.) |           |         | Remarks                                                                                                                                                                                                                                                |
|---------|----------------------------------------------------------------------------------------------|-------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                                                                                              | Issued            | Available | Damaged |                                                                                                                                                                                                                                                        |
| 1       | Helmet                                                                                       | 01                | 01        | 01      | Helmet shall be free from physical damage & should have good inner roll and chin strap intact                                                                                                                                                          |
| 2       | Safety Shoes                                                                                 | 08                | 08        | 08      | Shoes shall be free from physical damage & should have good inner and electrical resistance                                                                                                                                                            |
| 3       | Goggles / Anti-Static                                                                        | 14                | 14        | 14      | Goggles shall be free from physical damage & should be in good condition                                                                                                                                                                               |
| 4       | Safety Goggles & Face Shield                                                                 |                   |           |         | Goggles & Face shield shall be free from defects such as Cracks for Goggles & Face shield & excessive wear                                                                                                                                             |
| 5       | Shoulder Pad                                                                                 | 10                | 10        | 10      | Shoulder Pad should be clean, good strength & cloth condition, gripper should be in good condition for holding to ear for chest protection                                                                                                             |
| 6       | Ear Plug / Ear Muff                                                                          |                   |           |         | Ear Plug / Muff shall be free from physical damage & should be in good condition                                                                                                                                                                       |
| 7       | Hand Gloves<br>Cotton<br>Rubber<br>Leather<br>Insulated (specify voltage resistance)         | 12                | 12        | 12      | Gloves shall be free from physical damage & should have good strength & cloth condition & free from wet conditions                                                                                                                                     |
| 8       | Full Body Harness                                                                            | 05                | 05        | 05      | Full body harness shall be free from physical damage, free from any damage to the rope, body shall be physical in good condition, free from opening & closing for correct buckles, D-ring, snap, shackle, & all components should be in good condition |
| 9       | Rope Grab Full Arrestor                                                                      | 05                | 05        | 05      | Rope grab shall be free from physical damage, free & correct locking latches                                                                                                                                                                           |
| 10      | Retractable Fall Arrestor<br>Specify in Dia & Length (mm)                                    | 05                | 05        | 05      | Fall arrestor shall be free from physical damage, free & correct locking latches                                                                                                                                                                       |
| 11      | Fall Arrestor rope (Vertical Life line)<br>Type of material:<br>Specify in Dia & Length (mm) | 05                | 05        | 05      | Rope shall be free from physical damage, joints & knots                                                                                                                                                                                                |
| 12      | Retractable Life line<br>Specify in Dia & Length (mm)                                        | 01                | 01        | 01      | Fall arrestor shall be free from physical damage, free & correct locking latches                                                                                                                                                                       |
| 13      | Back Chair                                                                                   |                   |           |         | Back Chair should be overall in good condition for usage                                                                                                                                                                                               |
| 14      | Safety Net                                                                                   |                   | N/A       |         | Safety Net shall be free from physical damage & should have good condition over rope & Net                                                                                                                                                             |
| 15      | ROCK/ELCB                                                                                    |                   |           |         | ROCK/ELCB shall be free from physical damage & should have good condition of tripping system                                                                                                                                                           |
| 16      | Free Type Induction Tester<br>WMTT (Without Magnetic Induction Tester)<br>Discharge Rods     |                   |           |         | Induction Tester should be in good working condition & magnet battery coil should be in good working condition & magnet battery coil should be kept with the tester                                                                                    |
| 17      | (a) 15kV<br>(b) 33kV<br>(c) 110kV<br>(d) 220kV<br>(e) 400kV                                  |                   | N/A       |         | Discharge Rods should be in good condition with adequate length for placing on electrical bus from the safe place with telescopic adjustments, if applicable. Proper provision of nut bolts, washers and cables should be available in good condition  |
| 18      | Working Oil Spill Rods                                                                       |                   |           |         | All types of oil spill rods should be in good condition & should be in good condition for usage                                                                                                                                                        |
| 19      | FWP Ladder                                                                                   |                   |           |         | FWP Ladder should be in good condition, free from rust and all parts & accessories should be available without                                                                                                                                         |
| 20      | Any others (Specify)                                                                         |                   |           |         |                                                                                                                                                                                                                                                        |

Site Supervisor / Section Incharge: **Parko Das** Site Engineer / Section Incharge:  SIGNED Name:

Site Supervisor / Section Incharge:  Site Engineer / Section Incharge:  SIGNED Sign:

## Pile Foundation Checklist Package 3

| PTD, TL BU                                                     |                                                                                                                                                                                                                                                                      |                                     |                                |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------|
| Name of Project: <u>ADB-3</u>                                  |                                                                                                                                                                                                                                                                      | Date of inspection: <u>08.07.24</u> |                                |
| Location number - <u>25/0</u>                                  |                                                                                                                                                                                                                                                                      |                                     |                                |
| Sl no                                                          | Points to be checked                                                                                                                                                                                                                                                 | Status (Yes/NO)                     | Corrective Action Status if No |
| <b>1. Tripod (Before Piling &amp; during Rig installation)</b> |                                                                                                                                                                                                                                                                      |                                     |                                |
| 1.1                                                            | Are the tripod legs are fastened properly? (ট্রাইপড পা কি ঠিকমত বাঁধা আছে?)                                                                                                                                                                                          | Yes                                 |                                |
| 1.2                                                            | Are all the bolts of flange joint fitted properly and tightened, with no blank hole? (ফ্ল্যাঞ্জ জয়েন্টের সমস্ত বোল্ট কি সঠিকভাবে লাগানো এবং শক্ত করা হয়েছে, কোন ফাঁকা গর্ত নেই?)                                                                                   | Yes                                 |                                |
| 1.3                                                            | Is the condition of main hanger pin/bolt found ok and free from any defect or damage? (প্রধান হ্যাঙ্গার পিন/বোল্টের অবস্থা কি ঠিক আছে এবং কোনো ত্রুটি বা ক্ষতি থেকে মুক্ত?)                                                                                          | Yes                                 |                                |
| 1.4                                                            | Is the wire rope used for hoisting of DMC pipe, tremie pipe found free from all defects like bird cage, broken wires, kink etc? (DMC পাইপ, ট্রেমি পাইপ উত্তোলনের জন্য ব্যবহৃত তারের দড়ি কি bird cage, ভাঙা তার, কিক্স ইত্যাদি সমস্ত ত্রুটি থেকে মুক্ত পাওয়া যায়?) | Yes                                 |                                |
| 1.5                                                            | Is the hook latch installed on hook used for hanging the load? (হকের উপর লাগানো হুক ল্যাচ কি লোড তুলানোর জন্য ব্যবহৃত হয়?)                                                                                                                                          | Yes                                 |                                |
| 1.6                                                            | Are minimum of 4 no U clamps installed for splicing of wire rope? (তারের দড়ি সংযুক্ত করার জন্য কি ন্যূনতম ৪টি U clamp ইনস্টল করা দেই?)                                                                                                                              | 03 no                               |                                |
| 1.7                                                            | Are the gap between all U clamps are equal? (সমস্ত U ক্ল্যাম্পের মধ্যে ফাঁক কি সমান?)                                                                                                                                                                                | Yes                                 |                                |
| 1.8                                                            | Are the bolt portion of U clamp is towards live end of wire rope? (U ক্ল্যাম্পের বোল্ট অংশ কি তারের দড়ির লাইভ প্রান্তের দিকে?)                                                                                                                                      | Yes                                 |                                |
| <b>2. Winch Machine (During Pile operation)</b>                |                                                                                                                                                                                                                                                                      |                                     |                                |
| 2.1                                                            | Are all rotatory parts guarded? (সব ঘূর্ণন অংশ রক্ষিত?)                                                                                                                                                                                                              | Yes                                 |                                |
| 2.2                                                            | Are 3 no V belts in use? (৩টি নো V বেল্ট কি ব্যবহার করা হয়েছে?)                                                                                                                                                                                                     | Yes                                 |                                |
| 2.3                                                            | Is exhaust pipe available? (নিকাসন পাইপ উপলব্ধ?)                                                                                                                                                                                                                     | Yes                                 |                                |
| 2.4                                                            | Is condition of pinion & shaft found ok? (পিনিয়ন ও শ্যাফটের অবস্থা কি ঠিক আছে?)                                                                                                                                                                                     | Yes                                 |                                |
| 2.5                                                            | Is condition of braise shoe & drum shoe found ok? (ব্রে শু এবং ড্রাম জুতার অবস্থা কি ঠিক আছে?)                                                                                                                                                                       | Yes                                 |                                |
| <b>3. Welding machine</b>                                      |                                                                                                                                                                                                                                                                      |                                     |                                |
| 3.1                                                            | Is welding machine covered by metal sheet (মেটাল শীট দ্বারা আবৃত ওয়েল্ডিং মেশিন হয়)                                                                                                                                                                                | Yes                                 |                                |
| 3.2                                                            | Is body earth available for welding machine (উল্টাই মেশিনের জন্য বডি আর্থিং উপলব্ধ)                                                                                                                                                                                  | Yes                                 |                                |
| 3.3                                                            | Is welding cable with earth clamp used for return path (রিটার্ন পথের জন্য ব্যবহৃত আর্থ ক্ল্যাম্প সহ ওয়েল্ডিং কেবল রয়েছে কি না?)                                                                                                                                    | Yes                                 |                                |
| 3.4                                                            | Is the welding cable is free from any defect, joint & damage (ওয়েল্ডিং তার কোন ত্রুটি, জয়েন্ট এবং ক্ষতি থেকে মুক্ত?)                                                                                                                                               | Yes                                 |                                |
| 3.5                                                            | Is welder having leather apron, leather gloves & welder face shield? (ওয়েল্ডারের কি চামড়ার এপ্রোন, চামড়ার গ্লাভস এবং ওয়েল্ডারের ফেস শিল্ড আছে?)                                                                                                                  | Yes                                 |                                |
| <b>4. Diesel generator</b>                                     |                                                                                                                                                                                                                                                                      |                                     |                                |
| 4.1                                                            | Is body earth of DG installed? (ডিজেল জেনারেটর বডি আর্থ কি ইনস্টল করা হয়েছে?)                                                                                                                                                                                       | Yes                                 |                                |
| 4.2                                                            | Is the DG terminal box is closed? (ডিজেল টার্মিনাল বক্স কি বন্ধ?)                                                                                                                                                                                                    | Yes                                 |                                |
| 4.3                                                            | Is only double core & double insulated cable used for electric power distribution? (বৈদ্যুতিক শক্তি বিতরণের জন্য কি শুধুমাত্র ডাবল কোর এবং ডাবল ইনসুলেটেড তার ব্যবহার করা হয়?)                                                                                      | Yes                                 |                                |
| 4.4                                                            | Is the electrical cable connection is by lugs & nut & bolt? (বৈদ্যুতিক তারের সংযোগ কি লগস এবং নট এবং বোল্ট দ্বারা হয়?)                                                                                                                                              | Yes                                 |                                |

Activity: INT Construction Interval Use

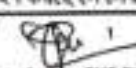
CS CamScanner

|                                                                                    |                                                                                                                                                                                                                                |     |  |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--|
| 4.5                                                                                | Is the RCCB/ELCB available for power supply? (বিদ্যুৎ সরবরাহের জন্য কি RCCB/ELCB উপলব্ধ?)                                                                                                                                      | Yes |  |
| 4.6                                                                                | Are 3 no V belts used in DG (ডিজিজেতে কি 3টি কি বেল্ট ব্যবহার করা হয়?)                                                                                                                                                        | Yes |  |
| 4.7                                                                                | Is the rotatory parts of DG guarded properly? (ডিজিজির ঘূর্ণায়মান অংশগুলি কি সঠিকভাবে অসুরক্ষিত?)                                                                                                                             | Yes |  |
| <b>5. Boring/Drilling</b>                                                          |                                                                                                                                                                                                                                |     |  |
| 5.1                                                                                | Are the system of double chain wrench wrapping system adopted for removing of DMC pipe after completion of boring. (যদিহিঃ শেষ হওয়ার পরে DMC পাইপ অপসারণের জন্য ডাবল চেইন ব্রেক মোড়ানো সিস্টেমের ব্যবস্থা গ্রহণ করা হয়েছে?) | Yes |  |
| 5.2                                                                                | Is the condition of stopper channel found ok without much opening? (স্টপার চ্যানেলের অবস্থা অনেক খোলা আছে কি না?)                                                                                                              |     |  |
| <b>6. Dewatering Pump</b>                                                          |                                                                                                                                                                                                                                |     |  |
| 6.1                                                                                | Is rotatory parts guarded properly? (ঘূর্ণন অংশ সঠিকভাবে ঢাকা আছে কি না?)                                                                                                                                                      | Yes |  |
| <b>7. Concrete Mixture Machine</b>                                                 |                                                                                                                                                                                                                                |     |  |
| 7.1                                                                                | Are all rotatory parts of machine guarded? (মেশিনের সমস্ত ঘূর্ণন অংশ কি সুরক্ষিত?)                                                                                                                                             | Yes |  |
| 7.2                                                                                | Are all workmen involved for aggregate & cement pouring with nose mask? (সমস্ত কর্মীরা যারা সিমেন্ট এবং বালি সরবরাহ করছে তারা কি নাকে মুখে গিয়ে কাজ করছে?)                                                                    | Yes |  |
| 7.3                                                                                | Is the person who will climb on hopper with full body harness? (যে ব্যক্তি ছাদে উঠার আরোহণ করছে সে সেফটি বেল্ট ব্যবহার করছে কি না?)                                                                                            | Yes |  |
| <p><i>Punitho Das</i></p> <p>Name &amp; Signature of Supervisor or EHS Steward</p> |                                                                                                                                                                                                                                |     |  |

| L&T Construction<br>PTD, TL BU                                 |                                                                                                                                                                                                                                                                    |                              |                                |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------|
| Name of Project: ADB-03                                        |                                                                                                                                                                                                                                                                    | Date of Inspection: 18.12.24 |                                |
| Location number - 31/0                                         |                                                                                                                                                                                                                                                                    |                              |                                |
| Sl no                                                          | Points to be checked                                                                                                                                                                                                                                               | Status (Yes/NO)              | Corrective Action Status if No |
| <b>1. Tripod (Before Piling &amp; during Rig Installation)</b> |                                                                                                                                                                                                                                                                    |                              |                                |
| 1.1                                                            | Are the tripod legs are fastened properly? (ট্রাইপড শ্যা কি ঠিকমত বাঁধা আছে?)                                                                                                                                                                                      | Yes                          |                                |
| 1.2                                                            | Are all the bolts of flange joint fitted properly and tightened, with no blank hole? (ফ্লাঞ্জ জয়েন্টের সমস্ত বোল্ট কি সঠিকভাবে লাগানো এবং শক্ত করা হয়েছে, কোন ফাঁকা গর্ত নেই?)                                                                                   | Yes                          |                                |
| 1.3                                                            | Is the condition of main hanger pin/bolt found ok and free from any defect or damage? (প্রধান হ্যাঙ্গার পিন/বোল্টের অবস্থা কি ঠিক আছে এবং কোনো ত্রুটি বা ক্ষতি থেকে মুক্ত?)                                                                                        | Yes                          |                                |
| 1.4                                                            | Is the wire rope used for hoisting of DMC pipe, tremie pipe found free from all defects like bird cage, broken wires, kink etc? (DMC পাইপ, ট্রেমি পাইপ উত্তোলনের জন্য ব্যবহৃত তারের তড়ি কি bird cage, ভাঙা তার, কিং ইত্যাদি সমস্ত ত্রুটি থেকে মুক্ত পাওয়া যায়?) | Yes                          |                                |
| 1.5                                                            | Is the hook latch installed on hook used for hanging the load? (ভরের উপর লাগানো হুক ল্যাচ কি লোড তুলার জন্য ব্যবহৃত হয়?)                                                                                                                                          | Yes                          |                                |
| 1.6                                                            | Are minimum of 4 no U clamps installed for splicing of wire rope? (তারের দৃষ্টি সংযুক্ত করার জন্য কি ন্যূনতম ৪টি U clamp ইনস্টল করা নেই?)                                                                                                                          | 03 No)                       |                                |
| 1.7                                                            | Are the gap between all U clamps are equal? (সমস্ত U ক্ল্যাম্পের মধ্যে ফাঁক কি সমান?)                                                                                                                                                                              | Yes                          |                                |
| 1.8                                                            | Are the bolt portion of U clamp is towards live end of wire rope? (U ক্ল্যাম্পের বোল্ট অংশ কি তারের তড়ি লাইভ প্রান্তের দিকে?)                                                                                                                                     | Yes                          |                                |
| <b>2. Winch Machine (During Pile operation)</b>                |                                                                                                                                                                                                                                                                    |                              |                                |
| 2.1                                                            | Are all rotatory parts guarded? (সব ঘূর্ণন অংশ গার্ড করা?)                                                                                                                                                                                                         | Yes                          |                                |
| 2.2                                                            | Are 3 no V belts in use? (৩টি নো V বেল্ট কি ব্যবহার করা হচ্ছে?)                                                                                                                                                                                                    | Yes                          |                                |
| 2.3                                                            | Is exhaust pipe available? (নিষ্কাশন পাইপ উপলব্ধ?)                                                                                                                                                                                                                 | Yes                          |                                |
| 2.4                                                            | Is condition of pinion & shaft found ok? (পিনিয়ন ও শ্যাফটের অবস্থা কি ঠিক আছে?)                                                                                                                                                                                   | Yes                          |                                |
| 2.5                                                            | Is condition of brae shoe & drum shoe found ok? (ব্রেক শূ এবং ড্রাম জুতার অবস্থা কি ঠিক আছে?)                                                                                                                                                                      | Yes                          |                                |
| <b>3. Welding machine</b>                                      |                                                                                                                                                                                                                                                                    |                              |                                |
| 3.1                                                            | Is welding machine covered by metal sheet (মেটাল শিট দ্বারা আবৃত ওভারলিট মেশিন হয়)                                                                                                                                                                                | Yes                          |                                |
| 3.2                                                            | Is body earth available for welding machine (গোল্ডি মেশিনের জন্য ভূমি অর্থিং উপলব্ধ?)                                                                                                                                                                              | Yes                          |                                |
| 3.3                                                            | Is welding cable with earth clamp used for return path (রিটার্ন পথের জন্য ব্যবহৃত আর্থ ক্ল্যাম্প সহ ওয়elding ক্যাবল কেবল করা হয়েছে কি না?)                                                                                                                       | Yes                          |                                |
| 3.4                                                            | Is the welding cable is free from any defect, joint & damage (ওয়elding ক্যাবল জয়েন্ট এবং ক্ষতি থেকে মুক্ত?)                                                                                                                                                      | Yes                          |                                |
| 3.5                                                            | Is welder having leather apron, leather gloves & welder face shield? (ওয়েল্ডারের কি চামড়ার এপ্রন, চামড়ার গ্লাভস এবং ওয়েল্ডার ফেস শিল্ড আছে?)                                                                                                                   | Yes                          |                                |
| <b>4. Diesel generator</b>                                     |                                                                                                                                                                                                                                                                    |                              |                                |
| 4.1                                                            | Is body earth of DG installed? (ডিজেল জেনারেটর বডি অর্থ কি ইনস্টল করা হয়েছে?)                                                                                                                                                                                     | Yes                          |                                |
| 4.2                                                            | Is the DG terminal box is closed? (ডিজেল টার্মিনাল বক্স কি বন্ধ?)                                                                                                                                                                                                  | Yes                          |                                |
| 4.3                                                            | Is only double core & double insulated cable used for electric power distribution? (বৈদ্যুতিক শক্তি বিতরণের জন্য কি শুধুমাত্র ডাবল কোর এবং ডাবল ইনসুলেটেড তার ব্যবহার করা হয়?)                                                                                    | Yes                          |                                |
| 4.4                                                            | Is the electrical cable connection is by lugs & nut & bolt? (বৈদ্যুতিক তারের সংযোগ কি লাগস এবং নট এবং বোল্ট দ্বারা হয়?)                                                                                                                                           | Yes                          |                                |

Sensitivity: LNT Construction Internal Use

CS CamScanner

|                                                                                                                                                             |                                                                                                                                                                                                                               |     |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--|
| 4.5                                                                                                                                                         | Is the RCCB/ELCB available for power supply? (বিদ্যুৎ সরবরাহের জন্য কি RCCB/ELCB উপলব্ধ?)                                                                                                                                     | Yes |  |
| 4.6                                                                                                                                                         | Are 3 no V belts used in DG (ডিজিলে কি ৩টি ভি বেল্ট ব্যবহার করা হয়?)                                                                                                                                                         | Yes |  |
| 4.7                                                                                                                                                         | Is the rotatory parts of DG guarded properly? (ডিজিলের ঘূর্ণায়মান অংশগুলি কি সঠিকভাবে আবদ্ধ করা?)                                                                                                                            | Yes |  |
| <b>5. Boring/Drilling</b>                                                                                                                                   |                                                                                                                                                                                                                               |     |  |
| 5.1                                                                                                                                                         | Are the system of double chain wrench wrapping system adopted for removing of DMC pipe after completion of boring. (বোরিং শেষ হওয়ার পরে DMC পাইপ অপসারণের জন্য ডাবল চেইন ব্রেক মোড়ানো সিস্টেমের ব্যবস্থা গ্রহণ করা হয়েছে?) | Yes |  |
| 5.2                                                                                                                                                         | Is the condition of stopper channel found ok without much opening? (স্টপার চ্যানেলের অবস্থা অনেক খোলা আছে কি না?)                                                                                                             |     |  |
| <b>6. Dewatering Pump</b>                                                                                                                                   |                                                                                                                                                                                                                               |     |  |
| 6.1                                                                                                                                                         | Is rotatory parts guarded properly? (ঘূর্ণন অংশ সঠিকভাবে ঢাকা আছে কি না?)                                                                                                                                                     | Yes |  |
| <b>7. Concrete Mixture Machine</b>                                                                                                                          |                                                                                                                                                                                                                               |     |  |
| 7.1                                                                                                                                                         | Are all rotatory parts of machine guarded? (মেশিনের সমস্ত ঘূর্ণন অংশ কি সুরক্ষিত?)                                                                                                                                            | Yes |  |
| 7.2                                                                                                                                                         | Are all workmen involved for aggregate & cement pouring with nose mask? (সমস্ত কর্মীরা যারা সিমেন্ট এবং বালি সরবরাহ করেছে তারা কি নাকে মুখোশ দিয়ে কাজ করেছে?)                                                                | Yes |  |
| 7.3                                                                                                                                                         | Is the person who will climb on hopper with full body harness? (যে ব্যক্তি ড্রামেল উপর আরোহণ করছে সে সেফটি বেল্ট ব্যবহার করেছে কি না?)                                                                                        | Yes |  |
| <p>matto De) </p> <p>Name &amp; Signature of Supervisor or EHS Steward</p> |                                                                                                                                                                                                                               |     |  |

| L&T Construction<br>PTD, TL BU                                 |                                                                                                                                                                                                                                                                  |                                     |                                |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------|
| Name of Project: <b>ADB-3</b>                                  |                                                                                                                                                                                                                                                                  |                                     |                                |
| Location number - <b>01A</b>                                   |                                                                                                                                                                                                                                                                  | Date of inspection: <b>05.11.24</b> |                                |
| Sl no                                                          | Points to be checked                                                                                                                                                                                                                                             | Status (Yes/NO)                     | Corrective Action Status if No |
| <b>1. Tripod (Before Piling &amp; during Rig Installation)</b> |                                                                                                                                                                                                                                                                  |                                     |                                |
| 1.1                                                            | Are the tripod legs are fastened properly? (ট্রাইপড পা কি ঠিকমত বাঁধা আছে?)                                                                                                                                                                                      | Yes                                 |                                |
| 1.2                                                            | Are all the bolts of flange joint fitted properly and tightened, with no blank hole? (ফ্লাঞ্জ জয়েন্টের সমস্ত বোল্ট কি সঠিকভাবে লাগানো এবং শক্ত করা হয়েছে, কোন ফাঁকা গর্ত নেই?)                                                                                 | Yes                                 |                                |
| 1.3                                                            | Is the condition of main hanger pin/bolt found ok and free from any defect or damage? (প্রধান হ্যাঙ্গার পিন/বোল্টের অবস্থা কি ঠিক আছে এবং কোনো ত্রুটি বা ক্ষতি থেকে মুক্ত?)                                                                                      | Yes                                 |                                |
| 1.4                                                            | Is the wire rope used for hoisting of DMC pipe, tremie pipe found free from all defects like bird cage, broken wires, kink etc? (DMC পাইপ, ট্রেমি পাইপ উত্তোলনের জন্য ব্যবহৃত তারের নতি কি bird cage, ভাঁজ আর, কিক ইত্যাদি সমস্ত ত্রুটি থেকে মুক্ত পাওয়া যায়?) | Yes                                 |                                |
| 1.5                                                            | Is the hook latch installed on hook used for hanging the load? (হুকের উপর লাগানো হুক ল্যাচ কি লোড তুলার জন্য ব্যবহৃত হয়?)                                                                                                                                       | Yes                                 |                                |
| 1.6                                                            | Are minimum of 4 no U clamps installed for splicing of wire rope? (তারের নতি সংযুক্ত করার জন্য কি মূনকম ৪টি U clamp ইনস্টল করা নেই?)                                                                                                                             | no                                  |                                |
| 1.7                                                            | Are the gap between all U clamps are equal? (সমস্ত U ক্ল্যাম্পের মধ্যে ফাঁকি কি সমান?)                                                                                                                                                                           | Yes                                 |                                |
| 1.8                                                            | Are the bolt portion of U clamp is towards live end of wire rope? (U ক্ল্যাম্পের বোল্ট অংশ কি তারের নতি প্রান্তের দিকে?)                                                                                                                                         | Yes                                 |                                |
| <b>2. Winch Machine (During Pile operation)</b>                |                                                                                                                                                                                                                                                                  |                                     |                                |
| 2.1                                                            | Are all rotatory parts guarded? (সব ঘূর্ণন অংশ রক্ষিত?)                                                                                                                                                                                                          | Yes                                 |                                |
| 2.2                                                            | Are 3 no V belts in use? (৩টি নো V বেল্ট কি ব্যবহার করা হয়েছে?)                                                                                                                                                                                                 | Yes                                 |                                |
| 2.3                                                            | Is exhaust pipe available? (নিষ্কাশন পাইপ উপলব্ধ?)                                                                                                                                                                                                               |                                     |                                |
| 2.4                                                            | Is condition of pinion & shaft found ok? (পিনিয়ন ও শ্যাফটের অবস্থা কি ঠিক আছে?)                                                                                                                                                                                 |                                     |                                |
| 2.5                                                            | Is condition of brake shoe & drum shoe found ok? (ব্রেক শূ ও ড্রাম শূের অবস্থা কি ঠিক আছে?)                                                                                                                                                                      |                                     |                                |
| <b>3. Welding machine</b>                                      |                                                                                                                                                                                                                                                                  |                                     |                                |
| 3.1                                                            | Is welding machine covered by metal sheet (মেটাল শীট দ্বারা আবৃত ওরেন্ডিং মেশিন হয়)                                                                                                                                                                             | Yes                                 |                                |
| 3.2                                                            | Is body earth available for welding machine (ডেলাই মেশিনের জন্য বডি আর্থিং উপলব্ধ?)                                                                                                                                                                              | Yes                                 |                                |
| 3.3                                                            | Is welding cable with earth clamp used for return path (রিটার্ন পাথের জন্য ব্যবহৃত আর্থ ক্ল্যাম্প সহ ওয়াল্ডিং কেবল রয়েছে কি না?)                                                                                                                               | Yes                                 |                                |
| 3.4                                                            | Is the welding cable is free from any defect, joint & damage (ওয়াল্ডিং তার কোন ত্রুটি, জয়েন্ট এবং ক্ষতি থেকে মুক্ত?)                                                                                                                                           | Yes                                 |                                |
| 3.5                                                            | Is welder having leather apron, leather gloves & welder face shield? (ওয়ার্ডারের কি চামড়ার এপ্রন, চামড়ার গ্লোভস এবং ওয়েল্ডার ফেস শিল্ড আছে?)                                                                                                                 | Yes                                 |                                |
| <b>4. Diesel generator</b>                                     |                                                                                                                                                                                                                                                                  |                                     |                                |
| 4.1                                                            | Is body earth of DG installed? (ডিজেল জেনারেটর বডি আর্থ কি ইনস্টল করা হয়েছে?)                                                                                                                                                                                   | Yes                                 |                                |
| 4.2                                                            | Is the DG terminal box is closed? (ডিজেল টার্মিনাল বক্স কি বন্ধ?)                                                                                                                                                                                                | Yes                                 |                                |
| 4.3                                                            | Is only double core & double insulated cable used for electric power distribution? (বৈদ্যুতিক শক্তি বিতরণের জন্য কি শুধুমাত্র ডাবল কোর এবং ডাবল ইনসুলেটেড তার ব্যবহার করা হয়?)                                                                                  | Yes                                 |                                |
| 4.4                                                            | Is the electrical cable connection is by lugs & nut & bolt? (বৈদ্যুতিক তারের সংযোগ কি লগস এবং নট এবং বোল্ট দ্বারা হয়?)                                                                                                                                          | Yes                                 |                                |

Sensitivity: L&amp;T Construction Internal Use

|                                                                                                                                                                      |                                                                                                                                                                                                                                 |     |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--|
| 4.5                                                                                                                                                                  | Is the RCCB/ELCB available for power supply? (নিম্নোক্ত সবকটিতেই 'হ্যাঁ' কিংবা 'Yes' উল্লেখ করুন)                                                                                                                               | Yes |  |
| 4.6                                                                                                                                                                  | Are 3 no V belts used in DI? (নিম্নোক্ত কিংবা 3টি ভি বেল্ট ব্যবহার করা হয়)                                                                                                                                                     | Yes |  |
| 4.7                                                                                                                                                                  | Is the rotatory parts of BG guarded properly? (নিম্নোক্ত ঘূর্ণায়মান অংশগুলি কি সঠিকভাবে আবদ্ধ করা হয়েছে?)                                                                                                                     | Yes |  |
| <b>5. Boring/Drilling</b>                                                                                                                                            |                                                                                                                                                                                                                                 |     |  |
| 5.1                                                                                                                                                                  | Are the system of double chain wrench wrapping system adopted for removing of DMC pipe after completion of boring. (বোরিং শেষ হওয়ার পরে DMC পাইপ অপসারণের জন্য ডাবল চেইন ব্রেক ফ্র্যাংকো সিস্টেমের ব্যবস্থা গ্রহণ করা হয়েছে?) | Yes |  |
| 5.2                                                                                                                                                                  | Is the condition of stopper channel found ok without much opening? (স্টপার চ্যানেলের অবস্থা অনেক খোলা আছে কি না?)                                                                                                               |     |  |
| <b>6. Dewatering Pump</b>                                                                                                                                            |                                                                                                                                                                                                                                 |     |  |
| 6.1                                                                                                                                                                  | Is rotatory parts guarded properly? (ঘূর্ণন অংশ সঠিকভাবে ঢাকা আছে কি না?)                                                                                                                                                       | Yes |  |
| <b>7. Concrete Mixture Machine</b>                                                                                                                                   |                                                                                                                                                                                                                                 |     |  |
| 7.1                                                                                                                                                                  | Are all rotatory parts of machine guarded? (মেশিনের সমস্ত ঘূর্ণন অংশ কি সুরক্ষিত?)                                                                                                                                              | Yes |  |
| 7.2                                                                                                                                                                  | Are all workmen involved for aggregate & cement pouring with nose mask? (সমস্ত কর্মীরা যারা সিমেন্ট এবং বালি সরবরাহ করেছে তারা কি নাকে মাস্ক দিয়ে কাজ করেছে?)                                                                  | Yes |  |
| 7.3                                                                                                                                                                  | Is the person who will climb on hopper with full body harness? (যে ব্যক্তি ফলনে উপর আরোহণ করেছে সে সেফটি বেল্ট ব্যবহার করেছে কি না?)                                                                                            | Yes |  |
| <p><i>partho Das</i> </p> <p>Name &amp; Signature of Supervisor or HSE Steward</p> |                                                                                                                                                                                                                                 |     |  |

## Safety Checklist for Work at Height and Erection Work (Package 4)

|                                                                                                              |                                 |                                              |
|--------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------|
| <br>Transrail Lighting Ltd. | <b>WORK AT HEIGHT CHECKLIST</b> | Format No.<br>TRANSRail/CONST/HSE/WH-CHK/003 |
|                                                                                                              |                                 | Rev. No: 01<br>Date: 01.04.2021              |

Name of Project: **ADB - Bangladesh (P-4)**      Project Code: **Gr-4A9**  
 Location: **711 (2B1+2)**      Date of Inspection: **9/11/24**

| SN | Description for activity                                                                                                                                                                      | Observation YES/NO/NA | Remark |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------|
| 1  | To Check Supervisors / Workmen have been provided with required healthy PPEs. Like (Safety helmet / Safety Harness / Safety Shoes / R. fall arrester / Reflecting Jacket/other as applicable) | Yes                   |        |
| 2  | Check availability of First Aid Box with required medicines at site.                                                                                                                          | Yes                   |        |
| 3  | To ensure whether PEP talk done or not before start of work.                                                                                                                                  | Yes                   |        |
| 4  | To Ensure Supervisor/Engg. always issues instruction to the Workmen including Sub-contractor workmen before start of work.                                                                    | Yes                   |        |
| 5  | All the workers have been explained safe work-procedures?                                                                                                                                     | Yes                   |        |
| 6  | Ensure is there any shut down work with the height job?                                                                                                                                       | NO                    |        |
| 7  | Adequate access/egress to be available at location?                                                                                                                                           | Yes                   |        |
| 8  | Ensure Binocular availability at site for height work monitoring?                                                                                                                             | Yes                   |        |
| 9  | Ensure shut down arrangement & required PPE at workplace, if shut down is taken?                                                                                                              | NA                    |        |
| 10 | Area below the workplace barricaded, especially below hot works.                                                                                                                              | Yes                   |        |
| 11 | Adequate illumination has been ensured                                                                                                                                                        | Yes                   |        |
| 12 | Work-area inspected prior to starting of the job.                                                                                                                                             | Yes                   |        |
| 13 | All work platforms ensured to be of adequate strength and ergonomically suitable.                                                                                                             | Yes                   |        |
| 14 | Walkways provided with hand-rail, mid-rail & toe guard?                                                                                                                                       | NA                    |        |
| 15 | Are ladders/step bolt properly tightened & secured if any to prevent slipping, sliding, or falling?                                                                                           | Yes                   |        |
| 16 | Ladders placed at right slope?                                                                                                                                                                | NA                    |        |
| 17 | Any obstruction in the stairs?                                                                                                                                                                | Yes                   |        |
| 18 | Are landings provided with handrails, knee-rails, toe-boards etc.                                                                                                                             | NA                    |        |
| 19 | Walkways, aisles & all overhead workplaces cleared of loose material.                                                                                                                         | Yes                   |        |
| 20 | Flammable material, if any, are cleared                                                                                                                                                       | NA                    |        |
| 21 | All shuttering material is removed after de-shuttering is done.                                                                                                                               | NA                    |        |
| 22 | Platforms and walkways free of oil / grease or other slippery spillage, if any.                                                                                                               | NA                    |        |
| 23 | Collected scrap are brought down or lowered down and not dropped from height & ensured tool kit lanyard with fitters for prevent to falling tools                                             | Yes                   |        |
| 24 | Use of safety helmets, Safety harness ensured for all workers.                                                                                                                                | Yes                   |        |
| 25 | Anchoring point and lifeline provided at workplace.                                                                                                                                           | Yes                   |        |
| 26 | Safety nets are in use wherever required.                                                                                                                                                     | Yes                   |        |
| 27 | Action taken for violation of safety norms, if any.                                                                                                                                           | Yes                   |        |
| 28 | Ensure the availability of Height Pass Cum ID card at location.                                                                                                                               | Yes                   |        |
| 29 | Ensure the Skill Matrix completed after HSE induction. (Only for new workers)                                                                                                                 | Yes                   |        |
| 30 | Ensure is any Child labour found at location during the work. (As per ID Proof)                                                                                                               | NA                    |        |
| 31 | Ensure Safety awareness poster/banner displayed at location.                                                                                                                                  | Yes                   |        |
| 32 | Any other point specific to location. (Mobile not to be use by workers (Fitter/Helper) during the height work.                                                                                | Yes                   |        |

  
Site Engg./Supervisor

  
HSE Officer

  
Section/Dept. I/C

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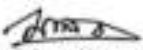
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|                                                                                                              |                                 |                                 |
|--------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------|
| <br>Transrail Lighting Ltd. | <b>WORK AT HEIGHT CHECKLIST</b> | Format No.                      |
|                                                                                                              |                                 | TRANSRAIL/CONST/HSE/WH-CHKL/003 |
|                                                                                                              |                                 | Rev. No: 01<br>Date: 01.04.2021 |

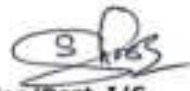
Name of Project: **ADB - 4 (Bangladesh)**  
 Location: **16A/1 (2QL+3)**

Project Code- **G-479**  
 Date of Inspection: **8/09/24**

| SN | Description for activity                                                                                                                                                                      | Observation YES/NO/NA | Remark |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------|
| 1  | To Check Supervisors / Workmen have been provided with required healthy PPEs. Like (Safety helmet / Safety Harness / Safety Shoes / R. fall arrester / Reflecting Jacket/other as applicable) | Yes                   |        |
| 2  | Check availability of First Aid Box with required medicines at site.                                                                                                                          | Yes                   |        |
| 3  | To ensure whether PEP talk done or not before start of work.                                                                                                                                  | Yes                   |        |
| 4  | To Ensure Supervisor/Engg. always issues instruction to the Workmen including Sub-contractor workmen before start of work.                                                                    | Yes                   |        |
| 5  | All the workers have been explained safe work-procedures?                                                                                                                                     | Yes                   |        |
| 6  | Ensure is there any shut down work with the height job?                                                                                                                                       | NA                    |        |
| 7  | Adequate access/egress to be available at location?                                                                                                                                           | Yes                   |        |
| 8  | Ensure Binocular availability at site for height work monitoring?                                                                                                                             | Yes                   |        |
| 9  | Ensure shut down arrangement & required PPE at workplace, if shut down is taken?                                                                                                              | NA                    |        |
| 10 | Area below the workplace barricaded, especially below hot works.                                                                                                                              | Yes                   |        |
| 11 | Adequate illumination has been ensured                                                                                                                                                        | Yes                   |        |
| 12 | Work-area inspected prior to starting of the job.                                                                                                                                             | Yes                   |        |
| 13 | All work platforms ensured to be of adequate strength and ergonomically suitable.                                                                                                             | Yes                   |        |
| 14 | Walkways provided with hand-rail, mid-rail & toe guard?                                                                                                                                       | NA                    |        |
| 15 | Are ladders/step bolt properly tightened & secured if any to prevent slipping, sliding, or falling?                                                                                           | Yes                   |        |
| 16 | Ladders placed at right slope?                                                                                                                                                                | NA                    |        |
| 17 | Any obstruction in the stairs?                                                                                                                                                                | Yes                   |        |
| 18 | Are landings provided with handrails, knee-rails, toe-boards etc.                                                                                                                             | NA                    |        |
| 19 | Walkways, aisles & all overhead workplaces cleared of loose material.                                                                                                                         | Yes                   |        |
| 20 | Flammable material, if any, are cleared                                                                                                                                                       | NA                    |        |
| 21 | All shuttering material is removed after de-shuttering is done.                                                                                                                               | Yes                   |        |
| 22 | Platforms and walkways free of oil / grease or other slippery spillage, if any.                                                                                                               | Yes                   |        |
| 23 | Collected scrap are brought down or lowered down and not dropped from height & ensured tool kit lanyard with fitters for prevent to falling tools                                             | Yes                   |        |
| 24 | Use of safety helmets, Safety harness ensured for all workers.                                                                                                                                | Yes                   |        |
| 25 | Anchoring point and lifeline provided at workplace.                                                                                                                                           | Yes                   |        |
| 26 | Safety nets are in use wherever required.                                                                                                                                                     | Yes                   |        |
| 27 | Action taken for violation of safety norms, if any.                                                                                                                                           | Yes                   |        |
| 28 | Ensure the availability of Height Pass Cum ID card at location.                                                                                                                               | Yes                   |        |
| 29 | Ensure the Skill Matrix completed after HSE induction. (Only for new workers)                                                                                                                 | Yes                   |        |
| 30 | Ensure is any Child labour found at location during the work. (As per ID Proof)                                                                                                               | NO                    |        |
| 31 | Ensure Safety awareness poster/banner displayed at location.                                                                                                                                  | Yes                   |        |
| 32 | Any other point specific to location. (Mobile not to be use by workers (Fitter/Helper) during the height work.                                                                                | Yes                   |        |

  
 Site Engg./Supervisor

  
 HSE Officer

  
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| TRANSRAIL<br>Transrail Lighting Limited                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Safety Checklist for Erection work                                                                                                                                                                                                                                   |        | Format No:<br>TRANSRAIL/CONST./HSE/ER-CHKL/011 |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------------------------------------|
|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                      |        | Rev. No: 00                                    |
|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                      |        | Date: 01.04.2021                               |
|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                      |        | Date of Inspection: 09/11/24                   |
| Name of the Project: <u>Gopalganj Shurchar</u>                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                      |        |                                                |
| Loc. No. <u>7/1</u> Classification and Type of tower <u>SSS (201+21mtr.)</u> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                      |        |                                                |
| Contractor <u>Sahajal Saeed</u>                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                      |        |                                                |
| Sr. No.                                                                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Observation                                                                                                                                                                                                                                                          | Remark |                                                |
| 1                                                                            | Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.                                                                                                                                                                                                                                                                                                                                                                                          | ✓ YES/NO/NA                                                                                                                                                                                                                                                          |        |                                                |
| 2                                                                            | a) All workers are using PPE at site i.e. Safety Helmets, Safety Belts, Fall Arrestors, R-fall Arrestor, Safety Shoes, Binocular, Hand Gloves, R-Jackets etc.<br><br>b) TLL officials are using PPEs at site.<br>c) Check all workers working at height have locked their safety belts.<br>d) Ensure workers are using mobile/horizontal fall arrestor while ascending / descending and working on tower.<br>e) Check no distraction for the workmen while ascending / descending from the tower. | Safety Helmet-No. in use/total workers -- 18/18<br><br>Safety Belt-No in use/ total workers -- 06/18<br><br>Safety Shoe-No. in use/total workers -- 18/18<br><br>Hand Gloves-No. in use/total worker 78/10<br><br>YES/NO/NA<br>YES/NO/NA<br>YES/NO/NA<br>✓ YES/NO/NA |        |                                                |
| 3                                                                            | Check that working underneath the tower is leveled properly.                                                                                                                                                                                                                                                                                                                                                                                                                                      | ✓ YES/NO/NA                                                                                                                                                                                                                                                          |        |                                                |
| 4                                                                            | a) Check all lifting tools & tackles being used at the site have been tested for safe working load and having valid test certificates. (Copies of the test certificate are checked by the site HSE Person & other TLL staff before start of the work).<br>b) Visual inspection of all T&P to be used at the site has been identified with identification No. and found to be in healthy condition.                                                                                                | Derrick Pole = 3 in pole.<br>Pulleys (Open & Closed) = 10<br>Ropes/Slings (Wire Rope) = 08<br>PP Rope = 10<br>D Shackles and hooks = 15<br>Power Winch Machine = 01<br>Any Other tools =                                                                             |        |                                                |
| 5                                                                            | All nuts and bolts of the stub are fitted and reasonably tightened.                                                                                                                                                                                                                                                                                                                                                                                                                               | ✓ YES/NO/NA                                                                                                                                                                                                                                                          |        |                                                |
| 6                                                                            | All nuts and bolts and step bolts are fitted in tower and have been reasonably tightened before undertaking job of upper section of the tower.                                                                                                                                                                                                                                                                                                                                                    | ✓ YES/NO/NA                                                                                                                                                                                                                                                          |        |                                                |
| 7                                                                            | Ensure proper guying arrangement for leg & Derrick Pole.                                                                                                                                                                                                                                                                                                                                                                                                                                          | ✓ YES/NO/NA                                                                                                                                                                                                                                                          |        |                                                |
| 8                                                                            | Ensure communication facility is available at the site.                                                                                                                                                                                                                                                                                                                                                                                                                                           | ✓ YES/NO/NA                                                                                                                                                                                                                                                          |        |                                                |
| 9                                                                            | Ensure only erection team members are allowed to stand near the tower while erection is in progress.                                                                                                                                                                                                                                                                                                                                                                                              | ✓ YES/NO/NA                                                                                                                                                                                                                                                          |        |                                                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                |                                                                                   |                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------|
|  <b>Safety Checklist for Erection work</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                | Format No:<br>TRANSRAIL/CONST./HSE/ER-CHKL/011<br>Rev. No: 00<br>Date: 01.04.2021 |                                 |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | a) Ensure for safety measures during tower erection near road/rail/river/adjoining power line.<br>b) Name of senior officials from TLL who available at site.  | YES/NO/NA<br>Name: <u>Abdul malek</u>                                             |                                 |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Adequate warning to public nearby ensured.                                                                                                                     | YES/NO/NA                                                                         |                                 |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | First Aid box with required items available at site.<br>Name & No. of First Aid trained workers.<br>a. <u>Rabiul</u><br>b. <u>A. Moller</u><br>c. <u>Rakib</u> | YES/NO/NA                                                                         |                                 |
| 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Action taken for violation of safety norms, if any.                                                                                                            | YES/NO/NA                                                                         |                                 |
| 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ensure the availability of Height Pass Cum ID card at location.                                                                                                | YES/NO/NA                                                                         |                                 |
| 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ensure the Skill Matrix completed after HSE induction. (Only for new workers)                                                                                  | YES/NO/NA                                                                         |                                 |
| 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ensure is any Child labour found at location during the work. (As per ID Proof)                                                                                | YES/NO/NA                                                                         | If Yes, then mark the name..... |
| 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ensure Safety awareness poster/banner displayed at location.                                                                                                   | YES/NO/NA                                                                         |                                 |
| 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Any other point specific to location. (Mobile not to be use by workers (Fitter/Helper) during the height work.                                                 | YES/NO/NA                                                                         |                                 |
| <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;"> <br/> <b>Site Supervisor/Engg.</b><br/>         Date: <u>9/11/24</u> </div> <div style="text-align: center;"> <br/> <b>HSE Officer/Engg.</b> </div> <div style="text-align: center;"> <br/> <b>Project Manager</b> </div> </div> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>Height work permit should be granted only if, the checklist for erection work is filled.</li> <li>Height Pass is mandatory for fitters who are engaged in the height work.</li> <li>Skill Matrix record is to be maintain after completing the HSE induction training of workmen. (Only for new joining subcontractor/gang workers)</li> </ol> |                                                                                                                                                                |                                                                                   |                                 |

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## Pile Foundation Checklist Package 4

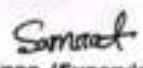
|                                                                                                                               |                                         |                                  |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------|
|  <b>TRANSRAIL</b><br>TRANSRAIL Lighting Ltd. | <b>PILE FOUNDATION SAFETY CHECKLIST</b> | Format No.                       |
|                                                                                                                               |                                         | TRANSRAIL/CONST/HSE/PFS-CHKL/021 |
|                                                                                                                               |                                         | Rev. No: 01<br>Date: 01.04.2021  |

## 1. To be filled up by the Site Supervisor / HSE Person (Piling Operation)

Name of the Project: ADB-Bangladesh (S-E)      Date of Inspection: 05.12.24  
 Name of the pile drivers: md Lalma      Loc No.- 31/2  
 Name of Contractor: Kadria Piling & Construction      Pile machine number: \*  
 Type of machine: Normal / Rig / Tripod ☒

## 2. Check Points before Piling

| Sl. No | Description                                                                                                                            | Yes / No / NA   |
|--------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1.     | Whether pile SOP / manual available at location?                                                                                       | ✓ Yes / No / NA |
| 2.     | To Check the underground utilities like, gas pipe lines and electrical cable line is essential.                                        | ✓ Yes / No / NA |
| 3.     | Is there any obstacles from ground surface, if yes then remove.                                                                        | ✓ Yes / No / NA |
| 4.     | To Ensure all pile driving equipments, const. design properly maintain or not.                                                         | ✓ Yes / No / NA |
| 5.     | Whether required warning signages are displayed at site or not?                                                                        | ✓ Yes / No / NA |
| 6.     | To Ensure the hard Barrication with appropriate fencing, to prevent on lookers and unauthorized person trespassing into the work site. | ✓ Yes / No / NA |
| 7.     | To Ensure the proper lux illumination, especially at night work                                                                        | ✓ Yes / No / NA |
| 8.     | To Ensure the proper arrangement of stacking of mud / slurry at location.                                                              | ✓ Yes / No / NA |
| 9.     | To Ensure the pile drive must be handled by the competent person.                                                                      | ✓ Yes / No / NA |
| 10.    | To Ensure lifting hook should be properly welded or not?                                                                               | ✓ Yes / No / NA |
| 11.    | To Ensure Exposed gears, flywheels, belts etc. is being guarded or not?                                                                | ✓ Yes / No / NA |
| 12.    | To Ensure third party testing done or not by the competent person.                                                                     | ✓ Yes / No / NA |
| 13.    | Whether Bentonite MSDS is available at site or not?                                                                                    | ✓ Yes / No / NA |
| 14.    | To Ensure the proper PPEs like nose mask, goggles, gum boots, rubber hand gloves for mixing and handling the bentonite.                | ✓ Yes / No / NA |
| 15.    | To ensure whether whistle, siren, horn or other effective signaling equipment with pile drivers available or not?                      | ✓ Yes / No / NA |
| 16.    | To Ensure the Emergency Equipments available at site or not?                                                                           | ✓ Yes / No / NA |

  
 Site Engg./Supervisor

  
 HSE Officer  
 Kishore Kumar Mahanta  
 DG, HSE Engineer

  
 Section/Project I/C

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|                                                                                   |                                         |                                  |
|-----------------------------------------------------------------------------------|-----------------------------------------|----------------------------------|
|  | <b>PILE FOUNDATION SAFETY CHECKLIST</b> | Form No.                         |
|                                                                                   |                                         | TRANSRAIL/CONST/HSE/PFS-CHKL/021 |
|                                                                                   |                                         | Rev. No: 01<br>Date: 01.04.2021  |

**Visual Inspection Check Points – To be checked & filled by machine operator along with site Engineer/Supervisor & HSE Persons.**

| Yes | NO | Pile Machine Cabin                                                                                                                                                                                     | Yes | NO | Over the water                                                                                                        |
|-----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|-----------------------------------------------------------------------------------------------------------------------|
|     |    | Cleanliness                                                                                                                                                                                            |     |    | Proper locking of crawler crane                                                                                       |
|     |    | Dopr operational                                                                                                                                                                                       |     |    | Crane barricading                                                                                                     |
|     |    | Deadman Pedal / Switch operational                                                                                                                                                                     |     |    | Ship edge fencing                                                                                                     |
|     |    | Handrails and ladders fitted and secure                                                                                                                                                                |     |    | Life jacket & lifebuoy                                                                                                |
|     |    | Seat adjustments operational secure with seat belt                                                                                                                                                     |     |    | Train Diving & First Aider                                                                                            |
|     |    | Warning devices and other lights (flashing, head, tail, etc) are appropriate for the environment in which plant is being used. (check environment noise criteria particularly if working out of hours) |     |    | Speed Boat / Motor Boat                                                                                               |
|     |    |                                                                                                                                                                                                        |     |    | Emergency Numbers display                                                                                             |
| Yes | NO | <b>Slew and Winch</b>                                                                                                                                                                                  | Yes | NO | <b>Mast Mountings</b>                                                                                                 |
| ✓   |    | Slew ring bolts fitted / tightened properly                                                                                                                                                            |     |    | Bolts, pins and retainers                                                                                             |
| ✓   | ✓  | Oil leaks from hydraulic and gear box                                                                                                                                                                  |     |    | Rigging, fittings, sheaves & slings have Manufacturer's ID / Working Load Limit (WLL) attached or supply certificates |
| ✓   |    | Test winch break on drum                                                                                                                                                                               |     |    | Wire line, pulleys, guides, steel cable free from damage and wear                                                     |
| ✓   |    | Check winches for leaks and damage and mounting bolts                                                                                                                                                  |     |    | Anti 2 block on service line (Auxiliary line)                                                                         |
| ✓   |    | Limit switch on rope travel                                                                                                                                                                            |     |    | Sliding pad wear condition                                                                                            |
| ✓   |    | Does the pawl break function                                                                                                                                                                           |     |    | Damage, cracks in mounting plates                                                                                     |
| ✓   |    | Brake operational                                                                                                                                                                                      |     |    | Boom angle indicator                                                                                                  |
| ✓   |    | Drivers free from leaks                                                                                                                                                                                | Yes | NO | <b>Other</b>                                                                                                          |
| Yes | NO | <b>Environmental</b>                                                                                                                                                                                   |     |    | Drill mode not allowing the operator to leave the seat with drill head turning                                        |
| ✓   |    | Clean, free of organic materials (mud, dirt, weeds, or seeds) prior to arrival                                                                                                                         |     |    | Transport mode allowing the operator to leave the seat and motor runs                                                 |
| ✓   |    | Engine baffling or noise reduction equipment fitted as per manufacturers specifications                                                                                                                |     |    | Job section pins and retainers                                                                                        |
| ✓   |    | Smoke from internal combustion engines should not be visible for more than ten seconds                                                                                                                 |     |    | Warning Signs - Danger Beware Overhead Wires & Underground Services                                                   |
| ✓   |    | Bentonite mud carried out ship tank                                                                                                                                                                    | Yes | NO | <b>Undercarriage</b>                                                                                                  |
| ✓   |    | Lubricant oil and other things don't drop the water.                                                                                                                                                   |     |    | Tracks complete and undamaged                                                                                         |
|     |    | Noise level & emission                                                                                                                                                                                 |     |    | Idlers / Rollers                                                                                                      |
| Yes | NO | <b>Drill Head</b>                                                                                                                                                                                      |     |    | Drivers free from leaks                                                                                               |
| ✓   |    | Guarding installed                                                                                                                                                                                     |     |    | Track Adjuster Sprockets                                                                                              |
| ✓   |    | Hydraulic                                                                                                                                                                                              | Yes | NO | <b>Hydraulic System &amp; Engine</b>                                                                                  |
| ✓   |    | Anchor points fitted for fall restraint systems                                                                                                                                                        |     |    | Rams / Hoses / Connector                                                                                              |
| ✓   |    | Slides and feed rails not damaged and all bolts, pins/ retainers fitted                                                                                                                                |     |    | Pins / Mounting & hydraulic isolator                                                                                  |
|     |    |                                                                                                                                                                                                        |     |    | Engine or Exhaust guarded                                                                                             |
|     |    |                                                                                                                                                                                                        |     |    | Air cleaner system & Battery condition                                                                                |

মো. নজমুজ্জাম  
Operator

Sumrat  
Site Engg./Supervisor

Khalid Kumar Mahanta  
DG, HSE Engineer

CONTROLLED

Page no. 2

CamScanner



| Monthly Basic Information Sheet Of Safety Work |                                               |                       |            |
|------------------------------------------------|-----------------------------------------------|-----------------------|------------|
| Subcontractor                                  | Mazumder Enterprise.                          | Project Manager       | Bipra Basu |
| Location/Site                                  | 230kV/132/33kV GIS, Pupshe.                   | Safety Engineer       | —          |
| Month                                          | Dec - 24                                      | Recorder              | Main Uddin |
| Main Indicator                                 |                                               |                       |            |
| No.                                            | Item                                          | Description           |            |
| 1                                              | The continuous safe operation day             | 31 days               |            |
| 2                                              | Near Miss                                     | —                     |            |
| 3                                              | Minor accident(Lose cost less than 1000USD)   | —                     |            |
| 4                                              | Major accident(Lose cost more than 1000USD)   | —                     |            |
| 5                                              | Pollution accident                            | —                     |            |
| Safety management system and safety actions    |                                               |                       |            |
| No.                                            | Item                                          | Description           |            |
| 1                                              | Safety organization management system on site | Good.                 |            |
| 2                                              | CNEEC safety documents and requirements       | Good.                 |            |
| 3                                              | Subcontractor safety documents                | Ok.                   |            |
| 4                                              | The amount of personal in current month end   | 30 Person.            |            |
| 5                                              | The amount of new comer                       | —                     |            |
| 6                                              | The amount of tool box talk                   | 15 days.              |            |
| 7                                              | Monthly hidden hazard inspection              | Follow the page - 02  |            |
| 8                                              | Machine and tool inspection activity          | Follow the page - 03  |            |
| 9                                              | Monthly safety meeting                        | Follow the page - 04. |            |

Note:

Please fill all tables and submit to CNEEC office before 30<sup>th</sup> every month.

| Machine And Tool Monthly Check List |                   |                     |        |                   |            |
|-------------------------------------|-------------------|---------------------|--------|-------------------|------------|
| Subcontractor                       |                   | Mazumder Enterprise |        | Location/Site     |            |
| Month                               |                   | December - 24       |        | Recorder          |            |
|                                     |                   |                     |        | Fupsha Main Uddin |            |
| No.                                 | Machine/Tool name | Check Method        | Status | Result            | Check Date |
| 1                                   | Welding machine   | manually            | Good   |                   |            |
| 2                                   | Rip machine       | manually            | Good   |                   | 10.12-24   |
| 3                                   | py loader         | manually            | Good   |                   |            |
| 4                                   | Mixture machine   | manually            | Good   |                   |            |
| 5                                   | Cutter machine    |                     | Good   |                   |            |
| 6                                   | Bending machine   |                     | Good   |                   |            |
| 7                                   | Vibrator machine  |                     | Good   |                   |            |
| 8                                   |                   |                     |        |                   |            |
| 9                                   |                   |                     |        |                   |            |
| 10                                  |                   |                     |        |                   |            |
| 11                                  |                   |                     |        |                   |            |
| 12                                  |                   |                     |        |                   |            |
| 13                                  |                   |                     |        |                   |            |
| 14                                  |                   |                     |        |                   |            |
| 15                                  |                   |                     |        |                   |            |
| 16                                  |                   |                     |        |                   |            |
| 17                                  |                   |                     |        |                   |            |
| 18                                  |                   |                     |        |                   |            |
| 19                                  |                   |                     |        |                   |            |

| Monthly Hidden Hazard Inspection (Monthly Safety Inspection) |                                                    |                   |                                                                                    |
|--------------------------------------------------------------|----------------------------------------------------|-------------------|------------------------------------------------------------------------------------|
| Subcontractor                                                | Mazumder Enterprise - Location/Site                |                   | Rupsha.                                                                            |
| Month                                                        | December - 24                                      | Check Date        | 10.12.24                                                                           |
| Conductor                                                    |                                                    | Recorder          | Main Ussin                                                                         |
| Attendees                                                    | Mr. Bipra Basu, Mr. Shumin Ahmed<br>Mr. Main Ussin |                   |                                                                                    |
| No.                                                          | Location/Activities                                | Hidden dangerous  | Rectification measures                                                             |
| 1                                                            | field                                              | Electrical cable. | All Electrical cable must be underground<br>Cable joint must be Taping by PVC Tap. |
| 2                                                            |                                                    |                   |                                                                                    |
| 3                                                            |                                                    |                   |                                                                                    |
| 4                                                            |                                                    |                   |                                                                                    |
| 5                                                            |                                                    |                   |                                                                                    |
| 6                                                            |                                                    |                   |                                                                                    |

| Monthly Safety Minutes Of Meeting                                                   |                                                                                                                                                                                                      |                                                                                      |         |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------|
| Subcontractor                                                                       | Mosumdes Enterprise                                                                                                                                                                                  | Location/Site                                                                        | Rupsha. |
| Month                                                                               | Dec- 24                                                                                                                                                                                              | Conductor                                                                            |         |
| Attendees                                                                           | Main Uddin. <del>SH</del><br>Shamim Ahmed - Shamim<br>Shourab - <del>Shourab</del> Md. Jafar Khan <del>SH</del><br>Bipra Basu <del>SH</del><br>Mostafa - Mostafa                                     |                                                                                      |         |
| Contents                                                                            | 1. Safety briefing everyday before Starting work.<br>2. All Electrical tools and equipment check must be, before Starting work.<br>3. All worker used proper safety (PPE).<br>4. No smoke work zone. |                                                                                      |         |
|  |                                                                                                                                                                                                      |  |         |
| Fig-1 Everyday Safety briefing before starting work.                                |                                                                                                                                                                                                      | Fig-2. Monthly safety meeting with ME official (site)                                |         |
| Signature by conductor: <del>SH</del><br>10.12.24                                   |                                                                                                                                                                                                      | Recorder: Main Uddin                                                                 |         |

**Annexure-28: Environmental Management Implementation Schedule (January- June 2025)**

| <b>Environmental Issues/Parameters</b> | <b>Monitoring Parameters</b>                                                 | <b>Standards/ Guidelines</b> | <b>Means of Monitoring</b> | <b>Frequency</b>                                         | <b>Location</b>                                               |
|----------------------------------------|------------------------------------------------------------------------------|------------------------------|----------------------------|----------------------------------------------------------|---------------------------------------------------------------|
| Requirement of land                    | Ensure that PAPs get compensation as per RP                                  | As per RP                    | Inspection                 | As per RP                                                | RoW of the package 2, 3 and 4                                 |
| Trimming of trees clearing vegetation  | Checking whether proper compensation as mentioned in RP is received by PAPs. | DoE/FD                       | Inspection                 | Regular during tree felling and site clearing operations | RoW of the package 2, 3 and 4                                 |
| Ambient Air Quality Parameters         | SPM, PM10, PM2.5, SOx, NOx, CO & Pb- 24hr monitoring                         | DoE standards                | Monitoring report analysis | Before construction                                      | At representative tower and substation construction sites     |
| Noise Pollution                        | Ambient noise level                                                          | DoE standards                | Monitoring report analysis | Regularly during construction                            | At adjacent subproject cultural sites and construction camps  |
| Pollution due to Wastes                | Checking storage, transportation, handling, and disposal of wastes.          | DoE guidelines               | Inspection                 | Regular                                                  | Construction sites and camps of Package 2-7                   |
| Surface Water Quality                  | pH, BOD5, COD, NH3-N, PO4, TPH and coliforms                                 | DoE Standards                | Monitoring report analysis | At all river crossings and within 500m of waterbodies    | River Crossing Sites near towers                              |
| Groundwater /Drinking Water Quality    | pH, Mn, Fe, As, TC, FC, TPH                                                  | DoE Standards                | Monitoring report analysis | Quarterly at all tube wells within 500m                  | At representative tower construction sites                    |
| Traffic congestion/ Road Accident      | Checking road crossing points, roads adjacent to towers.                     | BRTA                         | Inspection                 | Regular                                                  | At road/railway. crossing points and roads adjacent to towers |
| Occupational health and safety         | Use of PPE, general health, water supply and sanitation.                     | DoE/IFC guidelines           | Inspection                 | Regular                                                  | At construction sites and camps                               |
| Community health and safety            | Awareness of local people.                                                   | DoE/IFC guidelines           | Inspection                 | Regular                                                  | At tower construction sites and crossing of roads             |

## Annexure-29: PPE Inventories

### Package 2

**TBEA 特变电工**  
Always Reliable 全球信赖

**PPE Inventory**

Package: SL+A3.D6 5 Date: - 04 Jan 2025

| SL+A3.D6<br>5 | PPE Item                                                                                                                                                   | Unit    | RECEIVED QTY | Available QTY |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------|---------------|
| 1             | MEGA PHONE; TYPE :- SHOULDER; MAKE :- Ahuja; MODEL :- AM-20H PA ;                                                                                          | Numbers |              | 0.0           |
| 2             | ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTECH; MODEL :- AN300;                                                                                               | Numbers |              | 2.0           |
| 3             | KITTO CLAMP; MOC :- MS; DIA :- 12 - 14 MM;                                                                                                                 | Numbers |              | 5.0           |
| 4             | SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; Electrical grade; | Pairs   |              | 15.0          |
| 5             | GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; (full length); Staff                                                                                | Pairs   |              | 11.0          |
| 6             | ROCK CHAIR; MATERIAL :- Nylon Polyester; SIZE :- Width - 44 mm; Capacity - 23kN;                                                                           | Numbers |              | 10.0          |
| 7             | GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; (full length); Worker                                                                               | Pairs   |              | 26.0          |
| 8             | SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; With chin strap;                                                                                         | Numbers |              | 48.0          |
| 9             | ROPE GRAB FALL ARRESTER; anchorage lifeline;                                                                                                               | Numbers |              | 8.0           |
| 10            | SHOULDER PAD; MATERIAL :- Leather;                                                                                                                         | Numbers |              | 12.0          |
| 11            | SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; OTHER SPECIFICATIONS :- With chin strap;                                                                    | Numbers |              | 59.0          |
| 12            | LEATHER HAND GLOVES; APPLICATION :- Welding work; long; OTHER SPECIFICATIONS :- With inside cotton lining;                                                 | Pairs   |              | 12.0          |
| 13            | APRON; APPLICATION :- Welding work; MATERIAL :- Leather; OTHER SPECIFICATIONS :- With full sleeves;                                                        | Numbers |              | 18.0          |
| 14            | REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM)                                                                                                          | Sets    |              | 156.0         |
| 15            | FULL BODY SAFETY HARNESS; MATERIAL :- Nylon; WITH DOUBLE LANYARD SCAFFOLDING - HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT                                  | Sets    |              | 5.0           |
| 16            | ANCHORAGE LINE; MATERIAL :- POLYAMIDE ROPE; LENGTH :- 66 m; SIZE :- 14 mm DIA;                                                                             | Numbers |              | 11.0          |
| 17            | COTTON HAND GLOVES; GRADE :- Grade I; SIZE :- 10 long; WEIGHT :- 80; With latex coating on one side;                                                       | Pairs   |              | 18.0          |
| 18            | RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;                                                    | Pairs   |              | 22.0          |
| 19            | NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;                                                                                                           | Numbers |              | 134.0         |
| 20            | SURGICAL ITEMS; Reusable Washable Rubber Gloves                                                                                                            | Pairs   |              |               |
| 21            | MEDICINES SNAKE BITE MEDICINE KIT                                                                                                                          | Numbers |              |               |

134.0

134.0

|    |                                                                                                                                                                                   |         |  |       |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--|-------|
| 22 | FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg.                                                                                                                                     | Numbers |  | 12.0  |
| 23 | FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3;<br>OTHER SPECIFICATIONS :- With Stand & Canopy.                                                                                      | Numbers |  | 12.0  |
| 24 | MEDICINES; HAND SANITIZER REFILL 5 LTR                                                                                                                                            | Numbers |  | 20.0  |
| 25 | CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY :-<br>5 kg; OTHER SPECIFICATIONS :- Wall mounted<br>With stand.                                                                          | Numbers |  | 12.0  |
| 26 | CO2 GAS TYPE FIRE EXTINGUISHER; TYPE :- CO2;<br>CAPACITY :- 6.5 kg; OTHER SPECIFICATIONS :-<br>Wall mounted.                                                                      | Numbers |  | 12.0  |
| 27 | FIRE BUCKET STAND; TYPE :- T type.                                                                                                                                                | Numbers |  | 12.0  |
| 28 | SAFETY BARRICADE TAPE; MATERIAL :- LDPE;<br>TYPE :- Reflective; COLOUR :- Red & white stripes;<br>WIDTH :- 75 mm; THICKNESS :- 50 microns;<br>OTHER SPECIFICATIONS :- 500 m roll. | Numbers |  | 20.0  |
| 29 | TOOL LIFTING BAG; 25 kg.                                                                                                                                                          | Numbers |  | 50.0  |
| 30 | STRETCHER; TYPE :- canvas cover wooden frame<br>support.                                                                                                                          | Numbers |  | 42.0  |
| 31 | SAFETY BARRICADE TAPE                                                                                                                                                             | Numbers |  | 187.0 |
| 32 | TRAFFIC SAFETY CONE                                                                                                                                                               | Numbers |  | 53.0  |
| 33 | BINOCULAR                                                                                                                                                                         | Numbers |  | 1.0   |



## Package 3

## PPE Inventory

Date: 05 January 2025

| SL | MRN MATERIAL DESC                                                                                                                                                        | UOM DESC | RECEIVED QTY |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|
| 1  | MEGA PHONE; TYPE > SHOULDER; MAKE > Ahuja; MODEL > AM-20H PA ;                                                                                                           | Numbers  | 7.0          |
| 2  | ANEMOMETER; TYPE > DIGITAL; MAKE > EXTECH; MODEL > AN300;                                                                                                                | Numbers  | 7.0          |
| 3  | KITTO CLAMP; MOC > MS; DIA > 12 - 14 MM;                                                                                                                                 | Numbers  | 10.0         |
| 4  | SAFETY SHOES; APPLICATION > For staff; MATERIAL > Leather; TYPE > Male; PATTERN > With steel toe; TYPE OF SOLE > Polyurethane sole; SIZE > 6; Electrical grade;          | Pairs    | 5.0          |
| 5  | SAFETY SHOES; APPLICATION > For staff; MATERIAL > Leather; TYPE > Male; PATTERN > With steel toe; TYPE OF SOLE > Polyurethane sole; SIZE > 8; Electrical grade;          | Pairs    | 5.0          |
| 6  | SAFETY SHOES; APPLICATION > For staff; MATERIAL > Leather; TYPE > Male; PATTERN > With steel toe; TYPE OF SOLE > Polyurethane sole; SIZE > 9; Electrical grade;          | Pairs    | 5.0          |
| 7  | SAFETY SHOES; APPLICATION > For staff; MATERIAL > Leather; TYPE > Male; PATTERN > With steel toe; TYPE OF SOLE > Polyurethane sole; SIZE > 10; Electrical grade;         | Pairs    | 5.0          |
| 8  | GUM BOOTS; MATERIAL > PVC; PATTERN > With steel toe; SIZE > 7 (full length);                                                                                             | Pairs    | 20.0         |
| 9  | ROCK CHAIR; MATERIAL > Nylon Polyester; SIZE > Width - 44 mm; Capacity - 23kN;                                                                                           | Numbers  | 25.0         |
| 10 | GUM BOOTS; MATERIAL > PVC; PATTERN > With steel toe; SIZE > 8 (full length);                                                                                             | Pairs    | 25.0         |
| 11 | GUM BOOTS; MATERIAL > PVC; PATTERN > With steel toe; SIZE > 9 (full length);                                                                                             | Pairs    | 25.0         |
| 12 | SAFETY HELMET; MATERIAL > HDPE; TYPE > Ratchet; COLOUR > White; With chin strap; with embossed L&T Logo                                                                  | Numbers  | 200.0        |
| 13 | SAFETY SHOES; APPLICATION > For workmen; MATERIAL > Leather; TYPE > Male; PATTERN > With steel toe; TYPE OF SOLE > Polyurethane sole; SIZE > 7; Electrical grade;        | Pairs    | 45.0         |
| 14 | ROPE GRAB FALL ARRESTER; SIZE > 50 m long anchorage lifeline;                                                                                                            | Numbers  | 60.0         |
| 15 | SAFETY SHOES; APPLICATION > For workmen; MATERIAL > Leather; TYPE > Male; PATTERN > With steel toe; TYPE OF SOLE > Direct injected PVC sole; SIZE > 6; Electrical grade; | Pairs    | 45.0         |
| 16 | SHOULDER PAD; MATERIAL > Leather;                                                                                                                                        | Numbers  | 200.0        |
| 17 | SAFETY HELMET; MATERIAL > HDPE; TYPE > Nape; COLOUR > Yellow; OTHER SPECIFICATIONS > With chin strap;                                                                    | Numbers  | 300.0        |
| 18 | SAFETY HELMET; MATERIAL > HDPE; TYPE > Ratchet; COLOUR > Blue; OTHER SPECIFICATIONS > With chin strap;                                                                   | Numbers  | 10.0         |
| 19 | LEATHER HAND GLOVES; APPLICATION > Welding work; SIZE > 14 long; OTHER SPECIFICATIONS > With inside cotton lining;                                                       | Pairs    | 1000.0       |

| SL | MRN MATERIAL DESC                                                                                                                                                                                                                                               | UOM DESC | RECEIVED QTY |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|
| 20 | SAFETY HELMET; MATERIAL > HDPE; TYPE > Nape; COLOUR > Yellow; With chin strap; with embossed L&T Logo                                                                                                                                                           | Numbers  | 0.0          |
| 21 | ROPE GRAB FALL ARRESTER; CE certified conforming to EN 353 - 2 - 1993 made of mild steel with galvanized coating / stainless steel Gravity locking mechanism 14 mm opening;                                                                                     | Numbers  | 120.0        |
| 22 | RETRACTABLE FALL ARRESTER BLOCK; LENGTH > 15 m; CE certified and conforming to EN 360 2002 casing made up of high impact strength polymer comes with galvanized steel wire rope of dia. 4.5mm; provided with swivel snap hook anchorage eye with swivel action; | Numbers  | 20.0         |
| 23 | SAFETY HELMET REFILL; TYPE > Ratchet; OTHER SPECIFICATIONS > With nylon chin strap;                                                                                                                                                                             | Numbers  | 100.0        |
| 24 | APRON; APPLICATION > Welding work; MATERIAL > Leather; OTHER SPECIFICATIONS > With full sleeves;                                                                                                                                                                | Numbers  | 10.0         |
| 25 | SAFETY SHOES; APPLICATION > For workmen; MATERIAL > PVC; PATTERN > With steel toe; TYPE OF SOLE > Direct injected PVC sole; SIZE > 8;                                                                                                                           | Pairs    | 45.0         |
| 26 | REFLECTIVE JACKET; MATERIAL > Polyester (80 GSM); COLOUR > Orange; Reflective tape: micro prismatic reflective tapes 5 cm. wide total length-260 cm. reflective L&T logo with L&T LIFE & TRAFFIC MARSHALL logo at front and back opening type: front            | Sets     | 500.0        |
| 27 | SAFETY SHOES; APPLICATION > For workmen; MATERIAL > PVC; PATTERN > With steel toe; TYPE OF SOLE > Direct injected PVC sole; SIZE > 9;                                                                                                                           | Pairs    | 40.0         |
| 28 | FULL BODY SAFETY HARNESS; MATERIAL > Nylon; WITH DOUBLE LANYARD SCAFFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT;                                                                                                                                         | Sets     | 120.0        |
| 29 | SAFETY SHOES; APPLICATION > For staff; MATERIAL > PU; PATTERN > With steel toe; TYPE OF SOLE > Direct injected single density polyurethane sole; SIZE > 6;                                                                                                      | Pairs    | 5.0          |
| 30 | ANCHORAGE LINE; MATERIAL > POLYAMIDE ROPE; LENGTH > 66 m; SIZE > 14 mm DIA;                                                                                                                                                                                     | Numbers  | 10.0         |
| 31 | SAFETY HELMET; MATERIAL > PVC; TYPE > Load carrying; COLOUR > Yellow; With chin strap                                                                                                                                                                           | Numbers  | 40.0         |
| 32 | REFLECTIVE JACKET; MATERIAL > Polyester (130 GSM); COLOUR > Green; 3M Glass Bead reflective tape: 5 cm wide Total length -232 cm reflective L&T logo at front and back. opening type: front vest with 2-3 large Velcro;                                         | Sets     | 43.0         |
| 33 | COTTON HAND GLOVES; GRADE > Grade I; SIZE > 10 long; WEIGHT > 80; With latex coating on one side;                                                                                                                                                               | Pairs    | 0.0          |
| 34 | RUBBER HAND GLOVES; APPLICATION > Electrical work; GRADE > 33 kV; SIZE > 14 long; Acid/alkali proof;                                                                                                                                                            | Pairs    | 20.0         |
| 35 | NOSE MASK; MATERIAL > Cotton; TYPE > Reusable;                                                                                                                                                                                                                  | Numbers  | 190.0        |
| 36 | SAFETY SHOES; MATERIAL > PU; TYPE > Male; PATTERN > With fibre toe; TYPE OF SOLE > Polyurethane sole; SIZE > 8; Electrical grade;                                                                                                                               | Pairs    | 10.0         |

| SL | MRN MATERIAL DESC                                                                                                                                                        | UOM DESC | RECEIVED QTY |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|
| 37 | SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 5; Electrical grade;                                   | Pairs    | 10.0         |
| 38 | SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;                                   | Pairs    | 10.0         |
| 39 | SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Green; With chin strap;                                                                                         | Numbers  | 10.0         |
| 40 | RETRACTABLE FALL ARRESTER BLOCK; MATERIAL :- Polymer; LENGTH :- 15 m;                                                                                                    | Numbers  | 10.0         |
| 41 | REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange Red; SIZE :- Medium (M); With full sleeves;                                                          | Numbers  | 100.0        |
| 42 | SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;                                   | Pairs    | 20.0         |
| 43 | SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;                                                                                           | Numbers  | 30.0         |
| 44 | SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;                                                                                           | Numbers  | 30.0         |
| 45 | SURGICAL ITEMS; Reusable Washable Rubber Gloves                                                                                                                          | Pairs    | 40.0         |
| 46 | MEDICINES SNAKE BITE MEDICINE KIT                                                                                                                                        | Numbers  | 10.0         |
| 47 | FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;                                                                                                                            | Numbers  | 6.0          |
| 48 | FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3; OTHER SPECIFICATIONS :- With Stand & Canopy;                                                                                | Numbers  | 24.0         |
| 49 | MEDICINES; HAND SANITIZER REFIL 5 LTR                                                                                                                                    | Numbers  | 1.0          |
| 50 | CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY :- 5 kg; OTHER SPECIFICATIONS :- Wall mounted With stand;                                                                       | Numbers  | 10.0         |
| 51 | CO2 GAS TYPE FIRE EXTINGUISHER; TYPE :- CO2; CAPACITY :- 6.5 kg; OTHER SPECIFICATIONS :- Wall mounted;                                                                   | Numbers  | 5.0          |
| 52 | FIRE BUCKET STAND; TYPE :- T type;                                                                                                                                       | Numbers  | 24.0         |
| 54 | SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll; | Numbers  | 200.0        |
| 55 | TESTER; TYPE :- Helmet mountable induction type;                                                                                                                         | Numbers  | 20.0         |
| 56 | Safety Mannequin ; TYPE :- FULL BODY; OTHER SPECIFICATIONS :- With pack;                                                                                                 | Numbers  | 50.0         |
| 57 | SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll; | Numbers  | 200.0        |
| 58 | DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 33 kV; WIRE SIZE :- 10 mm <sup>2</sup> ; WIRE LENGTH :- 15 m;                                                    | Numbers  | 30.0         |
| 59 | TESTER; TYPE :- Helmet mountable induction type;                                                                                                                         | Numbers  | 20.0         |
| 60 | TESTER; TYPE :- Pen Type;                                                                                                                                                | Numbers  | 20.0         |

| SL | MRN MATERIAL DESC                                                                                                                 | UOM DESC | RECEIVED QTY |
|----|-----------------------------------------------------------------------------------------------------------------------------------|----------|--------------|
| 61 | DISCHARGE ROD; TYPE -> Telescopic; DISCHARGE VOLTAGE -> 11 kV; WIRE SIZE -> 10 mm <sup>2</sup> ; WIRE LENGTH -> 13 m;             | Numbers  | 30.0         |
| 63 | TRAFFIC SAFETY CONE; MATERIAL -> LLDPE; SIZE -> 750 mm height; With heavy rubber base;                                            | Numbers  | 50.0         |
| 64 | TOOL LIFTING BAG; 25 kg;                                                                                                          | Numbers  | 120.0        |
| 65 | STRETCHER; TYPE -> canvas cover wooden spine support;                                                                             | Numbers  | 5.0          |
| 66 | SAFETY BARRICADE TAPE; MATERIAL -> PVC; TYPE -> Reflective; COLOUR -> Red & white stripes; WIDTH -> 3 ; THICKNESS -> 100 microns; | Numbers  | 200.0        |
| 67 | TRAFFIC SAFETY CONE; MATERIAL -> LLDPE; SIZE -> 750 mm height; With heavy rubber base;                                            | Numbers  | 50.0         |
| 68 | MEDICAL EQUIPMENT AS DESCRIBED FURTHER; Ambu Bag                                                                                  | Numbers  | 10.0         |
| 69 | EARTH ROD DRIVING SPIKE; MATERIAL -> GI; SUITABLE FOR -> 18 mm dia. rod;                                                          | Numbers  | 60.0         |
| 70 | BINOCULAR; MAKE -> Bushnell; MODEL -> 131250;                                                                                     | Numbers  | 10.0         |



## Package 4

| PPE Inventory |                                                                                                                                                                          |                  |              |               |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|---------------|
| SI-A3-D65     |                                                                                                                                                                          | Date: - 31.12.24 |              |               |
| Sl            | PPE Item                                                                                                                                                                 | Unit             | RECEIVED QTY | Available QTY |
| 1             | MEGA PHONE, TYPE : SHOULDER, MAKE : Ahuja, MODEL : AM-20H PA ;                                                                                                           | Numbers          | 2.0          | 2.0           |
| 2             | KITTO CLAMP, MOD : ME, DIA : 12 - 14 MM;                                                                                                                                 | Numbers          | 12.0         | 12.0          |
| 3             | SAFETY SHOES, APPLICATION : For staff, MATERIAL : Leather, TYPE : Male, PATTERN : With steel toe, TYPE OF SOLE : Polyurethane sole, SIZE : 8, Electrical grade;          | Pairs            | 10.0         | 5.0           |
| 4             | SAFETY SHOES, APPLICATION : For staff, MATERIAL : Leather, TYPE : Male, PATTERN : With steel toe, TYPE OF SOLE : Polyurethane sole, SIZE : 8, Electrical grade;          | Pairs            | 30.0         | 5.0           |
| 5             | SAFETY SHOES, APPLICATION : For staff, MATERIAL : Leather, TYPE : Male, PATTERN : With steel toe, TYPE OF SOLE : Polyurethane sole, SIZE : 9, Electrical grade;          | Pairs            | 10.0         | 8.0           |
| 6             | SAFETY SHOES, APPLICATION : For staff, MATERIAL : Leather, TYPE : Male, PATTERN : With steel toe, TYPE OF SOLE : Polyurethane sole, SIZE : 10, Electrical grade;         | Pairs            | 15.0         | 10.0          |
| 7             | GUM BOOTS, MATERIAL : PVC, PATTERN : With steel toe, SIZE : 7 (full length);                                                                                             | Pairs            | 30.0         | 30.0          |
| 8             | ROCK CHAIR, MATERIAL : Nylon Polyester, SIZE : Width - 44 mm, Capacity - 23kN;                                                                                           | Numbers          |              |               |
| 9             | GUM BOOTS, MATERIAL : PVC, PATTERN : With steel toe, SIZE : 8 (full length);                                                                                             | Pairs            | 30.0         | 10.0          |
| 10            | GUM BOOTS, MATERIAL : PVC, PATTERN : With steel toe, SIZE : 9 (full length);                                                                                             | Pairs            | 30.0         | 10.0          |
| 11            | SAFETY HELMET, MATERIAL : HDPE, TYPE : Ratchet, COLOUR : White, With chin strap;                                                                                         | Numbers          | 100.0        | 60.0          |
| 12            | SAFETY SHOES, APPLICATION : For workmen, MATERIAL : Leather, TYPE : Male, PATTERN : With steel toe, TYPE OF SOLE : Polyurethane sole, SIZE : 7, Electrical grade;        | Pairs            | 150.0        | 100.0         |
| 13            | ROPE GRAB FALL ARRESTER, SIZE : 50 m long anchorage lifeline;                                                                                                            | Numbers          | 15.0         | 6.0           |
| 14            | SAFETY SHOES, APPLICATION : For workmen, MATERIAL : Leather, TYPE : Male, PATTERN : With steel toe, TYPE OF SOLE : Direct injected PVC sole, SIZE : 6, Electrical grade; | Pairs            | 50.0         | 20.0          |
| 15            | SHOULDER PAD, MATERIAL : Leather;                                                                                                                                        | Numbers          | 100.0        | 50.0          |
| 16            | SAFETY HELMET, MATERIAL : HDPE, TYPE : Nape, COLOUR : Yellow, OTHER SPECIFICATIONS : With chin strap;                                                                    | Numbers          | 100.0        | 150.0         |
| 17            | LEATHER HAND GLOVES, APPLICATION : Welding work, SIZE : 14 long, OTHER SPECIFICATIONS : With inside cotton lining;                                                       | Pairs            | 500.0        | 200.0         |

|    |                                                                                                                 |         |        |       |
|----|-----------------------------------------------------------------------------------------------------------------|---------|--------|-------|
| 18 | RETRACTABLE FALL ARRESTER BLOCK, LENGTH :- 10 m,                                                                | Numbers | 50.0   | 10.0  |
| 19 | APRON; APPLICATION :- Welding work, MATERIAL :- Leather                                                         | Numbers | 10.0   | 10.0  |
| 20 | FULL BODY SAFETY HARNESS,                                                                                       | Sets    | 100.0  | 60.0  |
| 21 | COTTON HAND GLOVES; GRADE :- Grade 1; SIZE :- 10' long; WEIGHT :- 30; With latex coating on one side,           | Pairs   | 1000.0 | 500.0 |
| 22 | REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange Red; SIZE :- Medium (M); With full sleeves; | Numbers | 500.0  | 200.0 |
| 23 | MEDICINES SNAKE BITE MEDICINE KIT                                                                               | Numbers |        |       |
| 24 | FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;                                                                   | Numbers | 15.0   | 15.0  |
| 25 | FIRE BUCKETS:-                                                                                                  | Numbers | 20.0   | 20.0  |
| 26 | TOOL LIFTING BAG, 25 kg;                                                                                        | Numbers | 20.0   | 5.0   |
| 27 | BINOCULAR;                                                                                                      | Numbers | 2.0    | 2.0   |



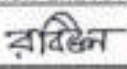
## Package 7

Date: 08.01.2025

| 230/132/33 Kv O/S Substation (Rupsha) |                            |      |       |
|---------------------------------------|----------------------------|------|-------|
| Safety Materials Inventory            |                            |      |       |
| 1                                     | Safety Red Shirts (Worker) | Pair | 25.00 |
| 2                                     | Rubber Shoes (Worker)      | Pair | 30.00 |
| 3                                     | Safety Helmet (Worker)     | Nos  | 70.00 |
| 4                                     | Safety Vest (Worker)       | Nos  | 70.00 |
| 5                                     | Safety Gumboot (Worker)    | Pair | 75.00 |
| 6                                     | Safety Shoes (Staff)       | Pair | 5.00  |
| 7                                     | Safety Helmet (Staff)      | Nos  | 25.00 |
| 8                                     | Safety Vest (Staff)        | Nos  | 10.00 |
| 9                                     | Lemon vest with out pocket | Nos  | 20.00 |
| 10                                    | Fire Extinguisher          | Nos  | 4.00  |
| 11                                    | Lether apron               | Nos  | 5.00  |
| 12                                    | Safety Goggles             | Nos  | 54.00 |
| 13                                    | Lether hand gloves         | Pair | 10.00 |
| 14                                    | Cushion Tape               | Nos  | 15.00 |
| 15                                    | fire Bucket                | Nos  | 2.00  |
| 16                                    | Hand mick                  | Nos  | 1.00  |
| 17                                    | First Aid Box              | Nos  | 1.00  |



## Annexure-30: Incident Register

|                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                       |                                                                                                                                                                                        |                                                                                                                |                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------|
|                                                                                                                                                                                                                                                                                              |                                                                                                       | <b>Incident Investigation Report</b><br>(Non-Reportable Accident (Minor) / Property Damage / Fire Incident / Environment Incident / Vehicle Incident / First Aid Incident / Near Miss) |                                                                                                                | Format No:<br>FI/CONST./FORM009A |
|                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                       |                                                                                                                                                                                        |                                                                                                                | Rev. No: 02<br>Date: 01.03.2024  |
| <b>Name of Site / Line / Factory / Office : G-479 scope-B</b>                                                                                                                                                                                                                                                                                                                 |                                                                                                       |                                                                                                                                                                                        |                                                                                                                |                                  |
| Incident Investigation Report No.                                                                                                                                                                                                                                                                                                                                             | OCT-24                                                                                                | Date of Investigation:                                                                                                                                                                 | 28.10.024                                                                                                      |                                  |
| Location/Area:                                                                                                                                                                                                                                                                                                                                                                | 7/1                                                                                                   | Date of Incident                                                                                                                                                                       | 28.10.24                                                                                                       |                                  |
| Department:                                                                                                                                                                                                                                                                                                                                                                   | Construction                                                                                          | Time of Incident:                                                                                                                                                                      | 11.30AM                                                                                                        |                                  |
| Employee (Company/Contractor)                                                                                                                                                                                                                                                                                                                                                 | —                                                                                                     |                                                                                                                                                                                        |                                                                                                                |                                  |
| Name of the Contractor (If applicable):                                                                                                                                                                                                                                                                                                                                       | Shahjalal Erectors                                                                                    |                                                                                                                                                                                        |                                                                                                                |                                  |
| Name of Injured Employee (Not Applicable in case of Near-Miss)                                                                                                                                                                                                                                                                                                                | —                                                                                                     |                                                                                                                                                                                        |                                                                                                                |                                  |
| Designation:                                                                                                                                                                                                                                                                                                                                                                  | —                                                                                                     |                                                                                                                                                                                        |                                                                                                                |                                  |
| Name of Person Reporting the Incident                                                                                                                                                                                                                                                                                                                                         | Abdul Halim                                                                                           |                                                                                                                                                                                        |                                                                                                                |                                  |
| <b>Incident Descriptions/Sequence of Events</b> Incident-During material shifting operations, a near miss occurred while transporting a main rod (approx. 230 meters) using an iron boat. The towing hook suddenly disengaged from the boat, causing the towing wire rope to jolt and potentially endangering nearby personnel and equipment. No property damages No injuries |                                                                                                       |                                                                                                                                                                                        |                                                                                                                |                                  |
| <b>Findings</b> - Near miss occurred when a towing hook disengaged from the iron boat while transporting a main rod (approx. 230 meters). The muddy location hindered visibility, making the broken hook undetectable.                                                                                                                                                        |                                                                                                       |                                                                                                                                                                                        |                                                                                                                |                                  |
| <b>Root Cause of Incident</b> Muddy location obscured visibility of broken hook.                                                                                                                                                                                                                                                                                              |                                                                                                       |                                                                                                                                                                                        |                                                                                                                |                                  |
| <b>Name of Witness:</b>                                                                                                                                                                                                                                                                                                                                                       | RABIUL                                                                                                |                                                                                                                                                                                        |                                                                                                                |                                  |
| <b>Worker Participation &amp; Consultation:</b><br>Md.KURBAN<br>ROCKEY HOSSAIN<br>Abdul Halim                                                                                                                                                                                                                                                                                 |                                                                                                       |                                                                                                                                                                                        |                                                                                                                |                                  |
| <b>Recommendations/Corrective Actions –</b><br>1. Regular inspection and maintenance of towing equipment<br>2. Enhanced training for operators on safe towing practices<br>3. Review and revision of safety procedures for material shifting operations                                                                                                                       |                                                                                                       |                                                                                                                                                                                        |                                                                                                                |                                  |
| <br>Worker/Worker Representative                                                                                                                                                                                                                                                           | <br>Safety Officer | <br>HOD (Contracted/Site In charge)                                                                 | <br>Regional/Factory Head |                                  |
| <b>Effectiveness of Corrective Action:</b><br>Name of Safety Officer/HOD (To be done within 30 days from the date of incident by Safety Officer or HOD of another Area )                                                                                                                                                                                                      |                                                                                                       |                                                                                                                                                                                        |                                                                                                                |                                  |
| All concerns are requested to comply corrective action immediately<br>Risk Register to be reviewed accordingly to the activities/operations found.                                                                                                                                                                                                                            |                                                                                                       |                                                                                                                                                                                        |                                                                                                                |                                  |

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|                                                                                                                 |                                                                                                                                                                                        |  |                                 |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------|
| <br>Transrail Lighting Limited | <b>Incident Investigation Report</b><br>(Non-Reportable Accident (Minor) / Property Damage / Fire Incident / Environment Incident / Vehicle Incident / First Aid Incident / Near Miss) |  | Format No:<br>F/CONST./FORM008A |
|                                                                                                                 |                                                                                                                                                                                        |  | Rev. No: 03<br>Date: 01.03.2024 |

|                                                                |              |                        |          |
|----------------------------------------------------------------|--------------|------------------------|----------|
| Name of Site / Line / Factory / Office : G-479 scope-A         |              |                        |          |
| Incident Investigation Report No.                              | NOV-24       | Date of Investigation: | 20.11.24 |
| Location/Area:                                                 | 4/2          | Date of Incident       | 21.11.24 |
| Department:                                                    | Construction | Time of Incident:      | 4.30PM   |
| Employee (Company/Contractor)                                  | CONTACTOR    |                        |          |
| Name of the Contractor (If applicable)                         | SAHAJALAL    |                        |          |
| Name of Injured Employee (Not Applicable in case of Near-Miss) | NIL          |                        |          |
| Designation:                                                   | NIL          |                        |          |
| Name of Person Reporting the Incident                          | TUSHAR MOLLA |                        |          |

**Incident Descriptions/Sequence of Events incident**  
 A near miss incident occurred during the lifting of the X-arm of the bottom section. Suddenly, heavy winds hit the lifting X-arm, causing it to destabilize and hit the tower body.

**Findings** - Unexpected weather conditions contributed to the near miss incident.

**Root Cause of Incident** . Unpredictable and severe weather conditions (heavy winds)

|                         |              |
|-------------------------|--------------|
| <b>Name of Witness:</b> | Tushar molla |
|-------------------------|--------------|

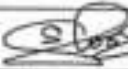
  

**Worker Participation & Consultation:**  
 Monir robul

**Recommendations/Corrective Actions** – 1. Implement a weather monitoring system to provide real-time wind speed data.  
 2. Develop and implement a contingency plan for unexpected weather conditions.  
 3. Conduct regular training sessions for personnel on wind safety and emergency procedures.  
 4. Review and revise the lifting plan to include wind safety considerations.

|                                                                                                                     |                                                                                                       |                                                                                                                       |                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <br>Worker/Worker Representative | <br>Safety Officer | <br>HOD(Concerned/Site In charge) | <br>Regional/Factory Head |
|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|

**Effectiveness of Corrective Action:**  
 Name of Safety Officer/HOD(To be done within 30 days from the date of incident by Safety Officer or HOD of another Area )

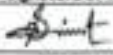
All concerns are requested to comply corrective action immediately

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## Annexure-31: TBT Participant List

## Package 2

| Name of the Project |            | Dhaka and Western Zone Transmission Grid Expansion Project (Package-2)            |                                                                                     |
|---------------------|------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Title of Training   |            | Date of Training                                                                  |                                                                                     |
| Toolbox Training    |            | 22-12-24                                                                          |                                                                                     |
| Name of Trainer     |            | Signature of Trainer                                                              | Venue                                                                               |
| Saiikat kumar       |            |  | Project site                                                                        |
| SN                  | Name       | Designation                                                                       | Signature                                                                           |
|                     | মানিক      | কর্মী                                                                             |  |
|                     | ইমরান      | কর্মী                                                                             |  |
|                     | কাজীম      | কর্মী                                                                             | কাজীম                                                                               |
|                     | আনিস       | আমিক                                                                              | আনিস                                                                                |
|                     | হাজীত      | কর্মী                                                                             | হাজীত                                                                               |
|                     | জাহিদ      | আমিক                                                                              | জাহিদ                                                                               |
|                     | বিমান      | আমিক                                                                              | বিমান                                                                               |
|                     | দিপু       | আমিক                                                                              | দিপু                                                                                |
|                     | মিলন       | আমিক                                                                              | মিলন                                                                                |
|                     | পিয়ামাশুজ | আমিক                                                                              | পিয়ামাশুজ                                                                          |
|                     | মকসুদ      | আমিক                                                                              | মকসুদ                                                                               |
|                     | মারুফ      | আমিক                                                                              | মারুফ                                                                               |
|                     | ইমরান      | আমিক                                                                              | ইমরান                                                                               |
|                     | কিরাম      | আমিক                                                                              | কিরাম                                                                               |

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| SN | Name     | Designation | Signature |
|----|----------|-------------|-----------|
| 15 | সুমন     | কর্মী       | সুমন      |
| 16 | মিলন     | কর্মী       | মিলন      |
| 17 | জাহান্না | কর্মী       | জাহান্না  |
| 18 | শাকিল    | কর্মী       | শাকিল     |
| 19 | ইকবাল    | অফিস        | ইকবাল     |
| 20 | ললিতা    | অফিস        | ললিতা     |
| 21 | নিপল     | কর্মী       | নিপল      |
| 22 | বিধান    | কর্মী       | বিধান     |
| 23 | আমির     | অফিস        | আমির      |
| 24 | শাহিন    | অফিস        | শাহিন     |
| 25 | রনি      | অফিস        | রনি       |
| 26 | মোমিন    | অফিস        | মোমিন     |
| 27 | মমিন     | অফিস        | মমিন      |
| 28 | রাফু     | অফিস        | রাফু      |
| 29 | জিক      | অফিস        | জিক       |
| 30 | নিপল     | কর্মী       | নিপল      |
| 31 | নিজিন    | কর্মী       | নিজিন     |
| 32 | রশিদ     | কর্মী       | রশিদ      |

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## Package 3

**L&T CONSTRUCTION**  
**POWER TRANSMISSION & DISTRIBUTION IC**

**ATTENDANCE SHEET FOR PEP-TALK**

Date: 31.12.2024  
Location: J/O.132KV  
Topics: Erection

In Time: 08.10Am  
Out Time: 05.22PM

Conducted By: Barun Kumar

| Sl. No. | Name                 | Designation | Signature |
|---------|----------------------|-------------|-----------|
| 1       | md. Sumon Hossain    | Foreman     |           |
| 2       | md. Ali Amin         | F           |           |
| 3       | md. Din Islammofazal | F           |           |
| 4       | md. Akad Hossen      | F           |           |
| 5       | md. Nur mohammad     | F           |           |
| 6       | md. Arifur Islam     | F           |           |
| 7       | md. Masud Rana       | F           |           |
| 8       | md. Liton Hossain    | F           |           |
| 9       | md. Sabbir Hossain   | F           |           |
| 10      | md. Sabbir Rahman    | F           |           |
| 11      | md. Shahidul Islam   | F           |           |
| 12      | md. Yeas Ali Sheikh  | H           |           |
| 13      | Deen mohammad Uzzal  | HI          |           |
| 14      | md. Dulal Hossain    | D. master   |           |
| 15      | md. Akram Hossain    | H           |           |
| 16      | md. Sahag Islam      | A           |           |
| 17      | md. Sumon Hossen     | H           |           |
| 18      |                      |             |           |
| 19      |                      |             |           |

Signature of Trainer \_\_\_\_\_

Barun Kumar

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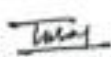
## Package 4

| <br>Transrail Lighting Limited                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Toolbox Meeting / Pep Talk</b> | Format No:<br><b>TRANSRAIL/CONST./HSE/TBM/016</b><br><br>Rev. No: 00<br>Date: 01.04.2021                 |         |                              |                 |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------|---------|------------------------------|-----------------|---------|------------------------------|-----------------|---|-----------|-------|----|-----------|-------|---|-----------|-------|----|-------|-------|---|-------|-------|----|-------|-------|---|-------|-------|----|-------|-------|---|-------|-------|----|-------|-------|---|-------|-------|----|-------|-------|---|-------------------|-------|----|--|--|---|-------|-------|----|--|--|---|-------|-------|----|--|--|
| NAME OF THE PROJECT: ADB BANGLADESH SCOPE-B<br>TOOL BOX/MEETING DATE: 09/10/2024<br>LOC./VENUE: 1/0<br>TIME: 9:00 AM<br>Number of workers Participation: 14<br>TOPIC Discussed: (As per work process)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                   | PROJECT CODE: G-479                                                                                      |         |                              |                 |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">         Remarks (if any)<br/><br/>         Signature of<br/>workmen       </div> <div style="width: 65%;"> <ol style="list-style-type: none"> <li>1. check the buck stay arrangement before shyal work.</li> <li>2. shyal work.</li> <li>3. All laborers are asked to wear vest. &amp; dm</li> <li>4. gum boots to work</li> <li>5. It is said not to use excess land in the location while working.</li> </ol> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                   |                                                                                                          |         |                              |                 |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Sl. No.</th> <th>Name of worker Participation</th> <th>Signature/Thumb</th> <th>Sl. No.</th> <th>Name of worker Participation</th> <th>Signature/Thumb</th> </tr> </thead> <tbody> <tr><td>1</td><td>মো: মুজিব</td><td>মুজিব</td><td>10</td><td>মো: মাসুম</td><td>মাসুম</td></tr> <tr><td>2</td><td>মো: মাসুম</td><td>মাসুম</td><td>11</td><td>মাসিম</td><td>মাসিম</td></tr> <tr><td>3</td><td>মাসিম</td><td>মাসিম</td><td>12</td><td>মাসিম</td><td>মাসিম</td></tr> <tr><td>4</td><td>মাসিম</td><td>মাসিম</td><td>13</td><td>মাসিম</td><td>মাসিম</td></tr> <tr><td>5</td><td>মাসিম</td><td>মাসিম</td><td>14</td><td>মাসিম</td><td>মাসিম</td></tr> <tr><td>6</td><td>মাসিম</td><td>মাসিম</td><td>15</td><td>মাসিম</td><td>মাসিম</td></tr> <tr><td>7</td><td>মো: মাসুম (মাসিম)</td><td>মাসিম</td><td>16</td><td></td><td></td></tr> <tr><td>8</td><td>মাসিম</td><td>মাসিম</td><td>17</td><td></td><td></td></tr> <tr><td>9</td><td>মাসিম</td><td>মাসিম</td><td>18</td><td></td><td></td></tr> </tbody> </table> |                                   |                                                                                                          | Sl. No. | Name of worker Participation | Signature/Thumb | Sl. No. | Name of worker Participation | Signature/Thumb | 1 | মো: মুজিব | মুজিব | 10 | মো: মাসুম | মাসুম | 2 | মো: মাসুম | মাসুম | 11 | মাসিম | মাসিম | 3 | মাসিম | মাসিম | 12 | মাসিম | মাসিম | 4 | মাসিম | মাসিম | 13 | মাসিম | মাসিম | 5 | মাসিম | মাসিম | 14 | মাসিম | মাসিম | 6 | মাসিম | মাসিম | 15 | মাসিম | মাসিম | 7 | মো: মাসুম (মাসিম) | মাসিম | 16 |  |  | 8 | মাসিম | মাসিম | 17 |  |  | 9 | মাসিম | মাসিম | 18 |  |  |
| Sl. No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Name of worker Participation      | Signature/Thumb                                                                                          | Sl. No. | Name of worker Participation | Signature/Thumb |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | মো: মুজিব                         | মুজিব                                                                                                    | 10      | মো: মাসুম                    | মাসুম           |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | মো: মাসুম                         | মাসুম                                                                                                    | 11      | মাসিম                        | মাসিম           |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | মাসিম                             | মাসিম                                                                                                    | 12      | মাসিম                        | মাসিম           |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | মাসিম                             | মাসিম                                                                                                    | 13      | মাসিম                        | মাসিম           |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | মাসিম                             | মাসিম                                                                                                    | 14      | মাসিম                        | মাসিম           |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | মাসিম                             | মাসিম                                                                                                    | 15      | মাসিম                        | মাসিম           |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | মো: মাসুম (মাসিম)                 | মাসিম                                                                                                    | 16      |                              |                 |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | মাসিম                             | মাসিম                                                                                                    | 17      |                              |                 |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | মাসিম                             | মাসিম                                                                                                    | 18      |                              |                 |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| <br>Signature of Site Supervisor/<br>Site Engg.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                   | <br>HSE Officer/Engg. |         |                              |                 |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| <br>Section/Project I/C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                                                                                          |         |                              |                 |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |
| Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.<br><br>HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLI team at location on daily basis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                   |                                                                                                          |         |                              |                 |         |                              |                 |   |           |       |    |           |       |   |           |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |       |       |    |       |       |   |                   |       |    |  |  |   |       |       |    |  |  |   |       |       |    |  |  |

Page | 1

**CONTROLLED**



| <br>Transrail Lighting Limited                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Toolbox Meeting / Pep Talk</b> | Format No:<br>TRANSRAIL/CONST./HSE/TBM/016<br>Rev. No: 00<br>Date: 01.04.2021 |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
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| NAME OF THE PROJECT: <u>ADB project Bangladesh (seape-c)</u> PROJECT CODE: <u>Gr/H9</u><br>TOOL BOX/MEETING DATE: <u>27-10-24</u><br>LOC./VENUE: <u>39/1</u><br>TIME: <u>9:50 AM</u><br>Number of workers Participation: <u>18</u><br>TOPIC Discussed: (As per work process) 1. * <u>কম্পাউন্ডিং কাজ - নিয়ন্ত্রণ</u><br>2. <u>নিয়ন্ত্রণের জন্য কাজ করা</u><br>3. <u>কাজের সময় নিয়ন্ত্রণ</u><br>4. * <u>কম্পাউন্ডিং কাজের সময় নিয়ন্ত্রণ</u><br>5. <u>নিয়ন্ত্রণের জন্য কাজ করা</u><br>Remarks (if any)<br>Signature of workmen                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                   |                                                                               |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
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| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| Sl. No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Name of worker Participation      | Signature/Thumb                                                               |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>সুজন রায়</u>                  | <u>[Signature]</u>                                                            |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |
| <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;"> <br/> <b>Signature of Site Supervisor/<br/>Site Engg.</b> </div> <div style="text-align: center;"> <br/> <b>HSE Officer/Engg.</b> </div> <div style="text-align: center;"> <br/> <b>Section/Project I/C</b> </div> </div> <p style="font-size: x-small; margin-top: 10px;">             Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.<br/>             HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.<br/>             Maintain the Theme based TBT topic during regular TBT.           </p> |                                   |                                                                               |                 |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |   |                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                              |                 |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |    |                  |                    |

Page | 1

CONTROLLED

|                                                                                                                                     |                                   |                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------|
| <br><b>TRANSRAIL</b><br>Transrail Lighting Limited | <b>Toolbox Meeting / Pep Talk</b> | Format No:<br>TRANSRAIL/CONST./HSE/TBM/016<br>Rev. No: 00<br>Date: 01.04.2021 |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------|

NAME OF THE PROJECT: *৬২০কি/৩০০০(১১) : ২২২০কি ২২০KV DTL PROJECT CODE: Gr 479(B)*

TOOL BOX/MEETING DATE: *02/11/24*

LOC./VENUE: *৭/১*

TIME: *৯.০০AM*

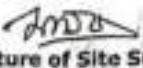
Number of workers Participation: *16*

TOPIC Discussed: (As per work process) *1. Check whether machine before start work.  
2. work.  
3. check All pulleys before start work.  
4. check All PP ROPE before start work.  
5. work.*

Remarks (if any)

Signature of workmen

| Sl. No. | Name of worker Participation | Signature/Thumb | Sl. No. | Name of worker Participation | Signature/Thumb |
|---------|------------------------------|-----------------|---------|------------------------------|-----------------|
| 1       | <i>MD. ROBIUL</i>            | <i>Robiul</i>   | 10      | <i>MD. REJAUZ</i>            | <i>Rejaul</i>   |
| 2       | <i>MD. RIFAN</i>             | <i>Rifan</i>    | 11      | <i>MD. HAKIM</i>             | <i>Hakim</i>    |
| 3       | <i>MD. RAJOAN</i>            | <i>Rajoan</i>   | 12      | <i>MD. SAJJIB</i>            | <i>Sajid</i>    |
| 4       | <i>MD. ROMJAN</i>            | <i>Romjan</i>   | 13      | <i>MD. AMIRUL</i>            | <i>Amirul</i>   |
| 5       | <i>MD. SAGOR</i>             | <i>Sagor</i>    | 14      | <i>MD. EJOUL</i>             | <i>Ejoal</i>    |
| 6       | <i>MD. RUMON</i>             | <i>Rumon</i>    | 15      | <i>MD. MUMSUR</i>            | <i>Mumsur</i>   |
| 7       | <i>MD. HABIBUR</i>           | <i>Habibur</i>  | 16      | <i>MD. MURJAN</i>            | <i>Murjan</i>   |
| 8       | <i>MD. NAHID</i>             | <i>Nahid</i>    | 17      |                              |                 |
| 9       | <i>MD. AKTER</i>             | <i>Akter</i>    | 18      |                              |                 |

  
 Signature of Site Supervisor/  
Site Engg.

  
 HSE Officer/Engg.

  
 Section/Project I/C

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                   |                                                                               |         |                              |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------|---------|------------------------------|-----------------|
| <br>Transrail Lighting Limited                                                                                                                                                                                                                                                                                                                                                                             | <b>Toolbox Meeting / Pep Talk</b> | Format No:<br>TRANSRAIL/CONST./HSE/TBM/016<br>Rev. No: 00<br>Date: 01.04.2021 |         |                              |                 |
| NAME OF THE PROJECT: ADB project Bangladesh (Scope-A) PROJECT CODE: Cr 449<br>TOOL BOX/MEETING DATE: 02.11.2021<br>LOC./VENUE: S/O<br>TIME: 8:00 AM<br>Number of workers Participation: 15<br>TOPIC Discussed: (As per work process) <ol style="list-style-type: none"> <li>1. - লক্ষ্যমাত্রা নির্ধারণ করা হয়েছে সময়</li> <li>2. অবসারণ - নিয়ন্ত্রণ করা হয়েছে</li> <li>3. স্থল</li> <li>4. - লক্ষ্যমাত্রা নির্ধারণ করা হয়েছে</li> <li>5. - লক্ষ্যমাত্রা নির্ধারণ করা হয়েছে</li> </ol> |                                   |                                                                               |         |                              |                 |
| Remarks (if any)<br>Signature of workmen                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                   |                                                                               |         |                              |                 |
| Sl. No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Name of worker Participation      | Signature/Thumb                                                               | Sl. No. | Name of worker Participation | Signature/Thumb |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | আবু সাইদ                          | আবু সাইদ                                                                      | 10      | আবু সাইদ                     | আবু সাইদ        |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | হাসান                             | HASAN                                                                         | 11      | আবু সাইদ                     | আবু সাইদ        |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | আবু সাইদ                          | আবু সাইদ                                                                      | 12      | আবু সাইদ                     | আবু সাইদ        |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | আবু সাইদ                          | আবু সাইদ                                                                      | 13      | আবু সাইদ                     | আবু সাইদ        |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | আবু সাইদ                          | আবু সাইদ                                                                      | 14      | আবু সাইদ                     | আবু সাইদ        |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | আবু সাইদ                          | আবু সাইদ                                                                      | 15      | আবু সাইদ                     | আবু সাইদ        |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | আবু সাইদ                          | আবু সাইদ                                                                      | 16      | আবু সাইদ                     | আবু সাইদ        |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | আবু সাইদ                          | আবু সাইদ                                                                      | 17      | আবু সাইদ                     | আবু সাইদ        |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | আবু সাইদ                          | আবু সাইদ                                                                      | 18      | আবু সাইদ                     | আবু সাইদ        |

Signature of Site Supervisor/  
Site Engg.

HSE Officer/Engg.

Section/Project I/C

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.  
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 Maintain the Theme based TBT topic during regular TBT.

CONTROLLED

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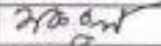
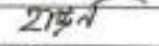
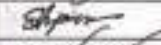
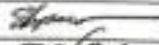
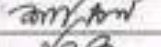
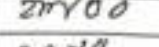
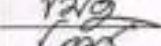
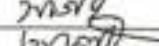
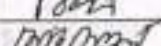
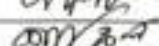
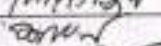
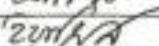
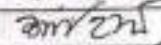
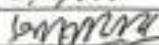
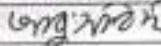
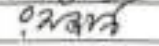
|                                                                                                                                     |                                   |                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------------------------------------------------------------|
| <br><b>TRANSRAIL</b><br>Transrail Lighting Limited | <b>Toolbox Meeting / Pep Talk</b> | Format No:<br><b>TRANSRAIL/CONST./HSE/TBM/016</b><br>Rev. No: 00<br>Date: 01.04.2021 |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------------------------------------------------------------|

NAME OF THE PROJECT: **গোপালগঞ্জ-শ্রীহরি 230 kV** PROJECT CODE: **6-4703**  
 TOOL BOX/MEETING DATE: **9/12/24**  
 LOC./VENUE: **ST 1**  
 TIME: **8:10 AM**  
 Number of workers Participation: **16**  
 TOPIC Discussed: (As per work process)
 

1. check condition of wheel machine
2. check condition of PP Rope.
3. check condition of pulley.
- 4.
- 5.

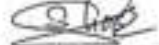
Remarks (if any)

Signature of workmen

| Sl. No. | Name of worker Participation | Signature/Thumb                                                                     | Sl. No. | Name of worker Participation | Signature/Thumb                                                                       |
|---------|------------------------------|-------------------------------------------------------------------------------------|---------|------------------------------|---------------------------------------------------------------------------------------|
| 1       | md. mekbal                   |  | 10      | md. Haran                    |  |
| 2       | md. Shapon                   |  | 11      | md. Shapon                   |  |
| 3       | md. Sakil                    |  | 12      | md. Habib                    |  |
| 4       | md. miju                     |  | 13      | md. Sagon                    |  |
| 5       | md. Ripon                    |  | 14      | md. ALI                      |  |
| 6       | md. mansedat                 |  | 15      | md. Sakil                    |  |
| 7       | md. Sagon                    |  | 16      | md. Easer                    |  |
| 8       | md. Sohad                    |  | 17      | md. Arrowan                  |  |
| 9       | md. Abu Sayeed               |  | 18      | md. Romjan                   |  |

  
**Signature of Site Supervisor/  
Site Engg.**

  
**HSE Officer/Engg.**

  
**Section/Project I/C**

**Note:** Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

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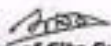
|                                                                                                                                     |                                   |                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------|
| <br><b>TRANSRAIL</b><br>Transrail Lighting Limited | <b>Toolbox Meeting / Pep Talk</b> | Format No:<br>TRANSRAIL/CONST./HSE/TBM/018<br>Rev. No: 00<br>Date: 01.04.2021 |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------|

NAME OF THE PROJECT: (GSP/3003W)-Shibchar 230 KV DCL PROJECT CODE: G-47919  
 TOOL BOX/MEETING DATE: 19/12/24  
 LOC./VENUE: 210  
 TIME: 8:00 AM  
 Number of workers Participation: 18  
 TOPIC Discussed: (As per work process) 1. Check condition of PP Role.  
 2. Check condition of winch machine.  
 3. Check condition of Pulley.  
 4.  
 5.

Remarks (If any)

Signature of workmen

| Sl. No. | Name of worker Participation | Signature/Thumb | Sl. No. | Name of worker Participation | Signature/Thumb |
|---------|------------------------------|-----------------|---------|------------------------------|-----------------|
| 1       | md. makbul                   |                 | 10      | md. Harun                    |                 |
| 2       | md. Shiron                   |                 | 11      | md. Shiron                   |                 |
| 3       | md. Sakil                    |                 | 12      | md. Habib                    |                 |
| 4       | md. Ripon                    |                 | 13      | md. Sagon                    |                 |
| 5       | md. migu                     |                 | 14      | md. Ali                      |                 |
| 6       | md. mensesal                 |                 | 15      | md. Ramjan                   |                 |
| 7       | md. Sagon                    |                 | 16      | md. Sakil                    |                 |
| 8       | md. Samed                    |                 | 17      | md. Easen                    |                 |
| 9       | md. Abu Sayeed               |                 | 18      | md. Anwar                    |                 |

Signature of Site Supervisor/ Site Engg.   
 HSE Officer/Engg.   
 Section/Project I/C 

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.  
 HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

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|                                                                                                                                                                                                                                                                                                                       |                              |                                   |         |                                                                               |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------|---------|-------------------------------------------------------------------------------|-----------------|
| <br><b>TRANSRAIL</b><br>Transrail Lighting Limited                                                                                                                                                                                   |                              | <b>Toolbox Meeting / Pep Talk</b> |         | Format No:<br>TRANSRAIL/CONST./HSE/TBM/016<br>Rev. No: 00<br>Date: 01.04.2021 |                 |
| NAME OF THE PROJECT: G0601 BONG (M) Shikhar 230KV DC TL PROJECT CODE: G-4798                                                                                                                                                                                                                                          |                              |                                   |         |                                                                               |                 |
| TOOL BOX/MEETING DATE: 16/12/24                                                                                                                                                                                                                                                                                       |                              |                                   |         |                                                                               |                 |
| LOC./VENUE: 9/1                                                                                                                                                                                                                                                                                                       |                              |                                   |         |                                                                               |                 |
| TIME: 8.05 AM                                                                                                                                                                                                                                                                                                         |                              |                                   |         |                                                                               |                 |
| Number of workers Participation: 16                                                                                                                                                                                                                                                                                   |                              |                                   |         |                                                                               |                 |
| TOPIC Discussed: (As per work process) 1. Use Safety belt before start work.<br>2. Use Reeltable before climbing on<br>3. Insulator.<br>4. Use Proper PPE before start.<br>5.                                                                                                                                         |                              |                                   |         |                                                                               |                 |
| Remarks (if any)                                                                                                                                                                                                                                                                                                      |                              |                                   |         |                                                                               |                 |
| Signature of<br>workmen                                                                                                                                                                                                                                                                                               |                              |                                   |         |                                                                               |                 |
| Sl. No.                                                                                                                                                                                                                                                                                                               | Name of worker Participation | Signature/Thumb                   | Sl. No. | Name of worker Participation                                                  | Signature/Thumb |
| 1                                                                                                                                                                                                                                                                                                                     | md. Makbul                   | [Signature]                       | 10      | md. Hareun                                                                    | [Signature]     |
| 2                                                                                                                                                                                                                                                                                                                     | md. Shipor                   | [Signature]                       | 11      | md. Shipor                                                                    | [Signature]     |
| 3                                                                                                                                                                                                                                                                                                                     | md. Sakil                    | [Signature]                       | 12      | md. Habib                                                                     | [Signature]     |
| 4                                                                                                                                                                                                                                                                                                                     | md. Ripor                    | [Signature]                       | 13      | md. Sagar                                                                     | [Signature]     |
| 5                                                                                                                                                                                                                                                                                                                     | md. Miju                     | [Signature]                       | 14      | md. Ali                                                                       | [Signature]     |
| 6                                                                                                                                                                                                                                                                                                                     | md. Mercedes                 | [Signature]                       | 15      | md. Ramzan                                                                    | [Signature]     |
| 7                                                                                                                                                                                                                                                                                                                     | md. Sagar                    | [Signature]                       | 16      | md. Sakil                                                                     | [Signature]     |
| 8                                                                                                                                                                                                                                                                                                                     | md. Sahed                    | [Signature]                       | 17      | md. Basen                                                                     | [Signature]     |
| 9                                                                                                                                                                                                                                                                                                                     | md. Abu Sayeed               | [Signature]                       | 18      | md. Anwar                                                                     | [Signature]     |
| Signature of Site Supervisor/<br>Site Engg.                                                                                                                                                                                                                                                                           |                              |                                   |         |                                                                               |                 |
| Signature of HSE Officer/Engg.                                                                                                                                                                                                                                                                                        |                              |                                   |         |                                                                               |                 |
| Section/Project Ii:                                                                                                                                                                                                                                                                                                   |                              |                                   |         |                                                                               |                 |
| Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.<br>HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis. |                              |                                   |         |                                                                               |                 |

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Package 7



## Pre-shift Safety Activity Record

Record No. CNEEC-SHE-

|                 |                                                                                 |                |              |
|-----------------|---------------------------------------------------------------------------------|----------------|--------------|
| Substation name | Rupsha, 230/132/33kv GIS SS,                                                    | Date           | 31.12.24     |
| Work detail     | 230KV blast wall - Pile.<br>132KV GIs - Pile, pile cap piling.<br>binding work. | Workers Amount | 51 Person.   |
| Organizer       | B/W Brick work                                                                  | Recorder       | Shorab Hasan |

| Contents |                                                                                                                                                |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | Safety talk:<br>1. Safety first.<br>2. Safety tools & equipment proper used (PPE)<br>3. Everyday safety briefing must be before starting work. |
| 1        | Possible safety risks and taken prevention measures during the work:<br>No Safety - No work.                                                   |

| Checking list                                            |        |
|----------------------------------------------------------|--------|
| Items                                                    | Result |
| 1 PPE is adequate and qualified or not                   | ✓      |
| 2 Workers get correct PPE or not                         | ✓      |
| 3 Workers correctly wear the PPE or not                  | ✓      |
| 4 Physical condition of workers                          | ✓      |
| 5 Worker gets correct tools or not                       | yes    |
| 6 Worker understands what's he have to do                | ✓      |
| 7 All the tools and machinery is good condition          | ✓      |
| 8 Object and equipment is in good condition              | ✓      |
| 9 Site conditions(light,ventilation,fire prevention,etc) | ✓      |
| 10 Whether exist hidden dangerous                        | No     |
| 11 Is there any person who supervise safety during work  | ✓      |
| 12 Whether there is emergency response measures          |        |

Others need be listed:

Signature of all attendees: *Shorab Hasan, Shorab Hasan, Shorab Hasan, Shorab Hasan, Shorab Hasan*

## Annexure-32: Environmental Monitoring Pictures

### Air Quality

#### Package 2



AQ1- In front of Eye Hospital, near the Substation Area in Bashundhara Residential Area



AQ-2 – Mosque, Near United International University (UIU)

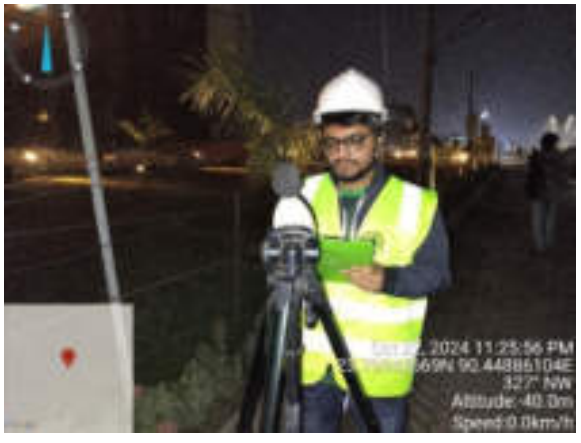


AQ-3- Near the Substation Area of Aftabnagar

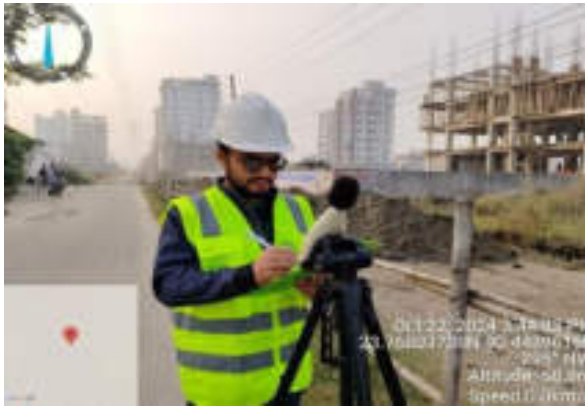
#### Package 5 & 6

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| AQ-4- In front of Hafej Sheikh's House                                            | AQ- 5- In front of Mohadev Karmakar's house                                        |

Noise Level Monitoring  
Package 2

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|   |   |
| NL-1 (Day)                                                                          | NL-1 (Night)                                                                         |
|  |  |
| NL-2 (Day)                                                                          | NL-2 (Night)                                                                         |

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
| NL-3 (Day)                                                                          | NL-3 (Night)                                                                         |
|   |   |
| NL-4 (Day)                                                                          | NL-4 (Night)                                                                         |
|  |  |
| NL-5 (Day)                                                                          | NL-5 (Night)                                                                         |

|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|   |   |
| NL-6 (Day)                                                                         | NL-6 (Night)                                                                        |
|  |  |
| NL-7 (Day)                                                                         | NL-7 (Night)                                                                        |

Package 5 & 6

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| NL 8                                                                                | NL 9                                                                                 |

Surface Water Sampling

Package 2

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
| SW-1- Lake side, Near Bashundhara L Block                                           | SW-2- Canal, Near United International University                                    |
|  |                                                                                      |
| SW-3- Canal, Near Aftabnagar Steel Bridge                                           |                                                                                      |
| <b>Package 5 &amp; 6</b>                                                            |                                                                                      |
|  |  |
| SW-4 Nohir Khal                                                                     | SW-5 Tongi Khal                                                                      |

Ground Water

Package 2



GW-1- Groundwater, Eye Hospital, Near the Substation Area in Bashundhara Residential Area



GW-2- Groundwater, Mosque, Near United International University



GW-3- Groundwater, Mosque, Near the Substation Area of Aftabnagar

## Soil Sampling

### Package 2



SQ-1- Non-agricultural land, Near the Substation Area in Bashundhara Residential Area



SQ-2- Non-agricultural land, Mosque, Near United University



SQ-3- Non-agricultural land, Near the Substation Area of Aftabnagar

Package 5 & 6



SQ 4 Hafej Sheikh's House



SQ 5 Beside Mohadev Karmakar's house

## Annexure-33: Environmental Monitoring Lab Sheet

## Package 2



Ref: ECIL/2024/213/AAQM

## Test Results of Ambient Air Quality Analysis

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Name of Project       | : Dhaka and Western Zone Transmission Grid Expansion Project [Package 2] |
| Description of Sample | : Ambient Air Quality Monitoring (AAQM)                                  |
| Sample Collector      | : Collected by EnviroCare Technical Team                                 |
| Sample Date           | : 22.10.2024                                                             |
| Date of Analysis      | : 23.10.2024-04.11.2024                                                  |
| Reporting Date        | : 05.11.2024                                                             |

| Sl. No.             | Sample Locations                                                                           | Concentration presents different parameters in ambient air |                   |                   |                   |                                  |                   |                   |                   |
|---------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------|-------------------|-------------------|----------------------------------|-------------------|-------------------|-------------------|
|                     |                                                                                            | SPM                                                        | PM <sub>10</sub>  | PM <sub>2.5</sub> | Pb                | SO <sub>2</sub>                  | NO <sub>x</sub>   | O <sub>3</sub>    | CO                |
| 1                   | AAQM-1-Near the Substation Area in Bashundhara Residential Area (GPS: 23.81644N 90.43622E) | 117.63                                                     | 72.28             | 33.83             | BDL               | 10.13                            | 17.38             | 6.73              | 0.67              |
| Unit                |                                                                                            | µg/m <sup>3</sup>                                          | µg/m <sup>3</sup> | µg/m <sup>3</sup> | µg/m <sup>3</sup> | µg/m <sup>3</sup>                | µg/m <sup>3</sup> | µg/m <sup>3</sup> | mg/m <sup>3</sup> |
| Duration            |                                                                                            | 8                                                          | 24                | 24                | 24                | 24                               | 24                | 8                 | 8                 |
| Method of Analysis  |                                                                                            | Light Scattering Nephelometer                              |                   |                   | AAS               | High Sensitivity Electrochemical |                   |                   |                   |
| Bangladesh Standard |                                                                                            | 200                                                        | 150               | 65                | 0.5               | 80                               | 80                | 100               | 5                 |

\*Standard: Air pollution Control Rules (APCR) On 26<sup>th</sup> July 2022; Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19<sup>th</sup> July, 2005; vide S.R.O. NO. 220-Law/2005.

Note: This ambient air monitoring report was usually accomplished by- portable OCEANUS AQM-09 & Air Sampler with Attachment (Single Head)

\*Note: BDL = Below the detection level, AAS=Atomic Absorption Spectroscopy

| Serial No. | Temperature         | Humidity | Wind Speed |
|------------|---------------------|----------|------------|
| 01         | 32.22 degreeCelsius | 70.19%   | 1.5 m/s    |

Source: On site Recording by Anemometer



*Signature*  
**Prepared By**  
 Md. Mehrab Hossain Manik  
 B.Sc. in Environmental Science (KU)  
 Assistant Consultant (Environment)

*Signature*  
**Reviewed By**  
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 Consultant (Environment) & Lab-in-charge, Team Lead, Dept. of EHS

*Signature*  
**Approved By**  
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 MSc in Environmental Science (BAU)  
 Quality Manager

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1



Ref: EGIL/2024/214/AAQM

## Test Results of Ambient Air Quality Analysis

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Name of Project       | : Dhaka and Western Zone Transmission Grid Expansion Project [Package 2] |
| Description of Sample | : Ambient Air Quality Monitoring (AAQM)                                  |
| Sample Collector      | : Collected by EnviroCare Technical Team                                 |
| Sample Date           | : 22.10.2024                                                             |
| Date of Analysis      | : 23.10.2024-04.11.2024                                                  |
| Reporting Date        | : 05.11.2024                                                             |

| Sl. No.             | Sample Locations                                                                     | Concentration presents different parameters in ambient air |                   |                   |                   |                                  |                   |                   |                   |
|---------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------|-------------------|-------------------|----------------------------------|-------------------|-------------------|-------------------|
|                     |                                                                                      | SPM                                                        | PM <sub>10</sub>  | PM <sub>2.5</sub> | Pb                | SO <sub>2</sub>                  | NO <sub>x</sub>   | O <sub>3</sub>    | CO                |
| 2                   | AAQM-2-Near United International University (UIU) Mosque<br>GPS: 23.79979N 90.44887E | 78.27                                                      | 48.43             | 12.38             | BDL               | 15.62                            | 24.28             | 16.38             | 1.22              |
| Unit                |                                                                                      | µg/m <sup>3</sup>                                          | µg/m <sup>3</sup> | µg/m <sup>3</sup> | µg/m <sup>3</sup> | µg/m <sup>3</sup>                | µg/m <sup>3</sup> | µg/m <sup>3</sup> | mg/m <sup>3</sup> |
| Duration            |                                                                                      | 8                                                          | 24                | 24                | 24                | 24                               | 24                | 8                 | 8                 |
| Method of Analysis  |                                                                                      | Light Scattering Nephelometer                              |                   |                   | AAS               | High Sensitivity Electrochemical |                   |                   |                   |
| Bangladesh Standard |                                                                                      | 200                                                        | 150               | 65                | 0.5               | 80                               | 80                | 100               | 5                 |

\*Standard: Air pollution Control Rules (APCR) On 26<sup>th</sup> July 2022; Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19<sup>th</sup> July, 2005; vide S.R.O. NO. 220-Law/2005.

Note: This ambient air monitoring report was usually accomplished by- portable OCEANUS AQM-09 & Air Sampler with Attachment (Single Head)

\*Note: BDL = Below the detection level, AAS=Atomic Absorption Spectroscopy

| Serial No. | Temperature          | Humidity | Wind Speed |
|------------|----------------------|----------|------------|
| 01         | 29.72 degree Celsius | 69.4%    | 2.1 m/s    |

Source: On site Recording by Anemometer



  
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2



Ref: EGIL/2024/215/AAQM

## Test Results of Ambient Air Quality Analysis

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Name of Project       | : Dhaka and Western Zone Transmission Grid Expansion Project [Package 2] |
| Description of Sample | : Ambient Air Quality Monitoring (AAQM)                                  |
| Sample Collector      | : Collected by EnviroCare Technical Team                                 |
| Sample Date           | : 23.10.2024                                                             |
| Date of Analysis      | : 24.10.2024-04.11.2024                                                  |
| Reporting Date        | : 05.11.2024                                                             |

| Sl. No.             | Sample Locations                                                           | Concentration presents different parameters in ambient air |                   |                   |                   |                                  |                   |                   |                   |
|---------------------|----------------------------------------------------------------------------|------------------------------------------------------------|-------------------|-------------------|-------------------|----------------------------------|-------------------|-------------------|-------------------|
|                     |                                                                            | SPM                                                        | PM <sub>10</sub>  | PM <sub>2.5</sub> | Pb                | SO <sub>2</sub>                  | NO <sub>2</sub>   | O <sub>3</sub>    | CO                |
| 3                   | AAQM-3- Near the Substation Area of Aftabnagar<br>GPS: 23.76667N 90.43124E | 62.18                                                      | 41.39             | 17.83             | BDL               | 11.39                            | 18.28             | 8.63              | 0.92              |
| Unit                |                                                                            | µg/m <sup>3</sup>                                          | µg/m <sup>3</sup> | µg/m <sup>3</sup> | µg/m <sup>3</sup> | µg/m <sup>3</sup>                | µg/m <sup>3</sup> | µg/m <sup>3</sup> | mg/m <sup>3</sup> |
| Duration            |                                                                            | 8                                                          | 24                | 24                | 24                | 24                               | 24                | 8                 | 8                 |
| Method of Analysis  |                                                                            | Light Scattering Nephelometer                              |                   |                   | AAS               | High Sensitivity Electrochemical |                   |                   |                   |
| Bangladesh Standard |                                                                            | 200                                                        | 150               | 65                | 0.5               | 80                               | 80                | 100               | 5                 |

\*Standard: Air pollution Control Rules (APCR) On 26<sup>th</sup> July 2022; Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19<sup>th</sup> July, 2005; vide S.R.O. NO. 220-Law/2005.

Note: This ambient air monitoring report was usually accomplished by- portable OCEANUS AQM-09 & Air Sampler with Attachment (Single Head)

\*Note: BDL = Below the detection level, AAS=Atomic Absorption Spectroscopy

| Serial No. | Temperature          | Humidity | Wind Speed |
|------------|----------------------|----------|------------|
| 01         | 29.81 degree Celsius | 72.88%   | 1.8 m/s    |

Source: On site Recording by Anemometer



Prepared By  
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Reviewed By  
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3



Ref: ECIL/2024/278/ANLM

**Test Results of Noise Level Analysis**

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Name of Project       | : Dhaka and Western Zone Transmission Grid Expansion Project (Package 2) |
| Description of Sample | : Ambient Noise Level Monitoring (ANLM)                                  |
| Sample Collector      | : Collected by EnviroCare Technical Team                                 |
| Sample Date           | : 22.10.2024                                                             |
| Date of Analysis      | : 23.10.2024-04.11.2024                                                  |
| Reporting Date        | : 05.11.2024                                                             |

**Sampling Location**

| Sl. No | Sample Locations                                                                | Sampling ID |
|--------|---------------------------------------------------------------------------------|-------------|
| 1      | Near the Substation Area in Bashundhara Residential Area<br>23.81641N 90.43627E | ANLM-1      |

**Test Result**

| Location                                                           | Concentration Present (dBA) |                  |                  |                 |                  |                  | Category |            |
|--------------------------------------------------------------------|-----------------------------|------------------|------------------|-----------------|------------------|------------------|----------|------------|
|                                                                    | Day                         |                  |                  | Night           |                  |                  |          |            |
|                                                                    | L <sub>eq</sub>             | L <sub>max</sub> | L <sub>min</sub> | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> |          |            |
| ANLM-1<br>Near the Substation Area in Bashundhara Residential Area | 62.26                       | 87.8             | 46.9             | 41.93           | 80.4             | 34.7             | Mixed    |            |
| Bangladesh Standard                                                |                             |                  |                  |                 |                  |                  | Day Time | Night Time |
| Industrial area                                                    |                             |                  |                  |                 |                  |                  | 75       | 70         |
| Commercial                                                         |                             |                  |                  |                 |                  |                  | 70       | 60         |
| Mixed area                                                         |                             |                  |                  |                 |                  |                  | 60       | 50         |
| Residential area                                                   |                             |                  |                  |                 |                  |                  | 55       | 45         |
| Silent Area                                                        |                             |                  |                  |                 |                  |                  | 50       | 40         |
| World Bank / IFC Standard                                          |                             |                  |                  |                 |                  |                  |          |            |
| Industrial area                                                    |                             |                  |                  |                 |                  |                  | 70       | 70         |
| Residential; Institutional; Educational                            |                             |                  |                  |                 |                  |                  | 55       | 45         |



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Ref: ECIL/2024/279/ANLM

**Test Results of Noise Level Analysis**

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Name of Project       | : Dhaka and Western Zone Transmission Grid Expansion Project (Package 2) |
| Description of Sample | : Ambient Noise Level Monitoring (ANLM)                                  |
| Sample Collector      | : Collected by EnviroCare Technical Team                                 |
| Sample Date           | : 22.10.2024                                                             |
| Date of Analysis      | : 23.10.2024-04.11.2024                                                  |
| Reporting Date        | : 05.11.2024                                                             |

**Sampling Location**

| Sl. No | Sample Locations                                                         | Sampling ID |
|--------|--------------------------------------------------------------------------|-------------|
| 2      | Near United International University (UIU) Mosque<br>23.79962N 90.44888E | ANLM-2      |

**Test Result**

| Location                                                       | Concentration Present (dBA) |                  |                  |                 |                  |                  | Category |            |
|----------------------------------------------------------------|-----------------------------|------------------|------------------|-----------------|------------------|------------------|----------|------------|
|                                                                | Day                         |                  |                  | Night           |                  |                  |          |            |
|                                                                | L <sub>eq</sub>             | L <sub>max</sub> | L <sub>min</sub> | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> |          |            |
| ANLM-2<br>Near United International University (UIU)<br>Mosque | 45.39                       | 77.5             | 35.1             | 37.22           | 66.9             | 32.8             | Silent   |            |
| Bangladesh Standard                                            |                             |                  |                  |                 |                  |                  | Day Time | Night Time |
| Industrial area                                                |                             |                  |                  |                 |                  |                  | 75       | 70         |
| Commercial                                                     |                             |                  |                  |                 |                  |                  | 70       | 60         |
| Mixed area                                                     |                             |                  |                  |                 |                  |                  | 60       | 50         |
| Residential area                                               |                             |                  |                  |                 |                  |                  | 55       | 45         |
| Silent Area                                                    |                             |                  |                  |                 |                  |                  | 50       | 40         |
| World Bank / IFC Standard                                      |                             |                  |                  |                 |                  |                  |          |            |
| Industrial area                                                |                             |                  |                  |                 |                  |                  | 70       | 70         |
| Residential; Institutional; Educational                        |                             |                  |                  |                 |                  |                  | 55       | 45         |



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Ref: ECIL/2024/280/ANLM

### Test Results of Noise Level Analysis

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Name of Project       | : Dhaka and Western Zone Transmission Grid Expansion Project (Package 2) |
| Description of Sample | : Ambient Noise Level Monitoring (ANLM)                                  |
| Sample Collector      | : Collected by EnviroCare Technical Team                                 |
| Sample Date           | : 22.10.2024                                                             |
| Date of Analysis      | : 23.10.2024-04.11.2024                                                  |
| Reporting Date        | : 05.11.2024                                                             |

### Sampling Location

| Sl. No | Sample Locations                                              | Sampling ID |
|--------|---------------------------------------------------------------|-------------|
| 3      | Near the Substation Area of Aftabnagar<br>23.76669N 90.43129E | ANLM-3      |

### Test Result

| Location                                         | Concentration Present (dBA) |                  |                  |                 |                  |                  | Category |            |
|--------------------------------------------------|-----------------------------|------------------|------------------|-----------------|------------------|------------------|----------|------------|
|                                                  | Day                         |                  |                  | Night           |                  |                  |          |            |
|                                                  | L <sub>eq</sub>             | L <sub>max</sub> | L <sub>min</sub> | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> |          |            |
| ANLM-3<br>Near the Substation Area of Aftabnagar | 58.45                       | 62.1             | 40.9             | 40.29           | 66.5             | 33.6             | Mixed    |            |
| Bangladesh Standard                              |                             |                  |                  |                 |                  |                  | Day Time | Night Time |
| Industrial area                                  |                             |                  |                  |                 |                  |                  | 75       | 70         |
| Commercial                                       |                             |                  |                  |                 |                  |                  | 70       | 60         |
| Mixed area                                       |                             |                  |                  |                 |                  |                  | 60       | 50         |
| Residential area                                 |                             |                  |                  |                 |                  |                  | 55       | 45         |
| Silent Area                                      |                             |                  |                  |                 |                  |                  | 50       | 40         |
| World Bank / IFC Standard                        |                             |                  |                  |                 |                  |                  |          |            |
| Industrial area                                  |                             |                  |                  |                 |                  |                  | 70       | 70         |
| Residential, Institutional, Educational          |                             |                  |                  |                 |                  |                  | 55       | 45         |



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Ref: ECIL/2024/281/ANLM

**Test Results of Noise Level Analysis**

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Name of Project       | : Dhaka and Western Zone Transmission Grid Expansion Project (Package 2) |
| Description of Sample | : Ambient Noise Level Monitoring (ANLM)                                  |
| Sample Collector      | : Collected by EnviroCare Technical Team                                 |
| Sample Date           | : 22.10.2024                                                             |
| Date of Analysis      | : 23.10.2024-04.11.2024                                                  |
| Reporting Date        | : 05.11.2024                                                             |

**Sampling Location**

| Sl. No | Sample Locations                                                  | Sampling ID |
|--------|-------------------------------------------------------------------|-------------|
| 4      | Near United International University (UIU)<br>23.79822N 90.44926E | ANLM-4      |

**Test Result**

| Location                                             | Concentration Present (dBA) |                  |                  |                 |                  |                  | Category               |
|------------------------------------------------------|-----------------------------|------------------|------------------|-----------------|------------------|------------------|------------------------|
|                                                      | Day                         |                  |                  | Night           |                  |                  |                        |
|                                                      | L <sub>eq</sub>             | L <sub>max</sub> | L <sub>min</sub> | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> |                        |
| ANLM-4<br>Near United International University (UIU) | 60.86                       | 80.8             | 42.2             | 46.25           | 79.3             | 34.2             | Mixed                  |
| Bangladesh Standard                                  |                             |                  |                  |                 |                  |                  | Day Time<br>Night Time |
| Industrial area                                      |                             |                  |                  |                 |                  |                  | 75<br>70               |
| Commercial                                           |                             |                  |                  |                 |                  |                  | 70<br>60               |
| Mixed area                                           |                             |                  |                  |                 |                  |                  | 60<br>50               |
| Residential area                                     |                             |                  |                  |                 |                  |                  | 55<br>45               |
| Silent Area                                          |                             |                  |                  |                 |                  |                  | 50<br>40               |
| World Bank / IFC Standard                            |                             |                  |                  |                 |                  |                  |                        |
| Industrial area                                      |                             |                  |                  |                 |                  |                  | 70<br>70               |
| Residential, Institutional, Educational              |                             |                  |                  |                 |                  |                  | 55<br>45               |



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Ref: ECIL/2024/282/ANLM

**Test Results of Noise Level Analysis**

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Name of Project       | : Dhaka and Western Zone Transmission Grid Expansion Project (Package 2) |
| Description of Sample | : Ambient Noise Level Monitoring (ANLM)                                  |
| Sample Collector      | : Collected by EnviroCare Technical Team                                 |
| Sample Date           | : 22.10.2024                                                             |
| Date of Analysis      | : 23.10.2024-04.11.2024                                                  |
| Reporting Date        | : 05.11.2024                                                             |

**Sampling Location**

| Sl. No | Sample Locations                           | Sampling ID |
|--------|--------------------------------------------|-------------|
| 5      | Near Base Camp Area<br>23.76816N 90.44922E | ANLM-5      |

**Test Result**

| Location                                | Concentration Present (dBA) |                  |                  |                 |                  |                  | Category               |
|-----------------------------------------|-----------------------------|------------------|------------------|-----------------|------------------|------------------|------------------------|
|                                         | Day                         |                  |                  | Night           |                  |                  |                        |
|                                         | L <sub>eq</sub>             | L <sub>max</sub> | L <sub>min</sub> | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> |                        |
| ANLM-5<br>Near Base Camp Area           | 52.34                       | 78.2             | 39.9             | 45.39           | 80.4             | 32.4             | Mixed                  |
| Bangladesh Standard                     |                             |                  |                  |                 |                  |                  | Day Time<br>Night Time |
| Industrial area                         |                             |                  |                  |                 |                  |                  | 75<br>70               |
| Commercial                              |                             |                  |                  |                 |                  |                  | 70<br>60               |
| Mixed area                              |                             |                  |                  |                 |                  |                  | 60<br>50               |
| Residential area                        |                             |                  |                  |                 |                  |                  | 55<br>45               |
| Silent Area                             |                             |                  |                  |                 |                  |                  | 50<br>40               |
| World Bank / IFC Standard               |                             |                  |                  |                 |                  |                  |                        |
| Industrial area                         |                             |                  |                  |                 |                  |                  | 70<br>70               |
| Residential, Institutional, Educational |                             |                  |                  |                 |                  |                  | 55<br>45               |



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Ref: ECIL/2024/283/ANLM

**Test Results of Noise Level Analysis**

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Name of Project       | : Dhaka and Western Zone Transmission Grid Expansion Project (Package 2) |
| Description of Sample | : Ambient Noise Level Monitoring (ANLM)                                  |
| Sample Collector      | : Collected by EnviroCare Technical Team                                 |
| Sample Date           | : 22.10.2024                                                             |
| Date of Analysis      | : 23.10.2024-04.11.2024                                                  |
| Reporting Date        | : 05.11.2024                                                             |

**Sampling Location**

| Sl. No | Sample Locations                                 | Sampling ID |
|--------|--------------------------------------------------|-------------|
| 6      | Near Mosque in Aftabnagar<br>23.76496N 90.44791E | ANLM-6      |

**Test Result**

| Location                                | Concentration Present (dBA) |                  |                  |                 |                  |                  | Category |            |
|-----------------------------------------|-----------------------------|------------------|------------------|-----------------|------------------|------------------|----------|------------|
|                                         | Day                         |                  |                  | Night           |                  |                  |          |            |
|                                         | L <sub>eq</sub>             | L <sub>max</sub> | L <sub>min</sub> | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> |          |            |
| ANLM-6<br>Near Mosque in Altabnagar     | 55.39                       | 81.6             | 39.2             | 40.82           | 76.2             | 34.1             | Mixed    |            |
| Bangladesh Standard                     |                             |                  |                  |                 |                  |                  | Day Time | Night Time |
| Industrial area                         |                             |                  |                  |                 |                  |                  | 75       | 70         |
| Commercial                              |                             |                  |                  |                 |                  |                  | 70       | 60         |
| Mixed area                              |                             |                  |                  |                 |                  |                  | 60       | 50         |
| Residential area                        |                             |                  |                  |                 |                  |                  | 55       | 45         |
| Silent Area                             |                             |                  |                  |                 |                  |                  | 50       | 40         |
| World Bank / IFC Standard               |                             |                  |                  |                 |                  |                  |          |            |
| Industrial area                         |                             |                  |                  |                 |                  |                  | 70       | 70         |
| Residential, Institutional, Educational |                             |                  |                  |                 |                  |                  | 55       | 45         |



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Ref: ECIL/2024/284/ANLM

### Test Results of Noise Level Analysis

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Name of Project       | : Dhaka and Western Zone Transmission Grid Expansion Project (Package 2) |
| Description of Sample | : Ambient Noise Level Monitoring (ANLM)                                  |
| Sample Collector      | : Collected by EnviroCare Technical Team                                 |
| Sample Date           | : 22.10.2024                                                             |
| Date of Analysis      | : 23.10.2024-04.11.2024                                                  |
| Reporting Date        | : 05.11.2024                                                             |

### Sampling Location

| Sl. No | Sample Locations                                   | Sampling ID |
|--------|----------------------------------------------------|-------------|
| 7      | Near Hospital in Aftabnagar<br>23.76577N 90.43756E | ANLM-7      |

### Test Result

| Location                                | Concentration Present (dBA) |           |           |          |           |           | Category               |
|-----------------------------------------|-----------------------------|-----------|-----------|----------|-----------|-----------|------------------------|
|                                         | Day                         |           |           | Night    |           |           |                        |
|                                         | $L_{eq}$                    | $L_{max}$ | $L_{min}$ | $L_{eq}$ | $L_{max}$ | $L_{min}$ |                        |
| ANLM-7<br>Near Hospital in Aftabnagar   | 53.62                       | 80.3      | 38.2      | 30.11    | 58.3      | 32.8      | Silent                 |
| Bangladesh Standard                     |                             |           |           |          |           |           | Day Time<br>Night Time |
| Industrial area                         |                             |           |           |          |           |           | 75<br>70               |
| Commercial                              |                             |           |           |          |           |           | 70<br>60               |
| Mixed area                              |                             |           |           |          |           |           | 60<br>50               |
| Residential area                        |                             |           |           |          |           |           | 55<br>45               |
| Silent Area                             |                             |           |           |          |           |           | 50<br>40               |
| World Bank / IFC Standard               |                             |           |           |          |           |           |                        |
| Industrial area                         |                             |           |           |          |           |           | 70<br>70               |
| Residential, Institutional, Educational |                             |           |           |          |           |           | 55<br>45               |



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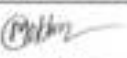
### Physical/ Chemical/ Bacteriological Analysis of Surface Water Sample

|                        |                                                                          |
|------------------------|--------------------------------------------------------------------------|
| Name of the Project    | : Dhaka and Western Zone Transmission Grid Expansion Project (Package-2) |
| Name of the Contractor | : TBREA CO., LTD                                                         |
| Description of sample  | : Surface Water                                                          |
| Location               | : Dhaka                                                                  |
| Sample Collector       | : Collected by EnviroCare Technical Team                                 |
| Analyzed By            | : BEETLSL Laboratory                                                     |
| Sample Collection Date | : 22.10.2024                                                             |

### LABORATORY TEST RESULTS

| SN | Parameters                      | Unit       | Analysis Method              | Concentration |      |      | Bangladesh Standard (ECR '2023) |
|----|---------------------------------|------------|------------------------------|---------------|------|------|---------------------------------|
|    |                                 |            |                              | SW-1          | SW-2 | SW-3 |                                 |
| 1  | Ammonia                         | mg/L       | UVS                          | 0.19          | 0.26 | 0.23 | 0.3                             |
| 2  | Biochemical Oxygen Demand (BOD) | mg/L       | 5 days incubation            | 17            | 21   | 19   | ≤5                              |
| 3  | Chemical Oxygen Demand (COD)    | mg/L       | CRM                          | 72            | 88   | 91   | 50                              |
| 4  | Coliform (Total)                | CFU/100 ml | MFM                          | 107           | 119  | 142  | ≤5000                           |
| 5  | Dissolved Oxygen (DO)           | mg/L       | Multimeter                   | 4.8           | 3.8  | 2.2  | ≥5.0                            |
| 6  | P <sup>H</sup>                  | -          | P <sup>H</sup> Meter         | 6.6           | 6.4  | 6.5  | 6-9                             |
| 7  | Total Dissolved Solid (TDS)     | mg/L       | Multimeter                   | 488           | 429  | 472  | 1000                            |
| 8  | Total Suspended Solid (TSS)     | mg/L       | Gravimetric Method           | 4             | 5    | 2    | NYS                             |
| 9  | Turbidity                       | NTU        | Turbidity Meter              | 8.5           | 10.7 | 10.1 | NYS                             |
| 10 | NH <sub>3</sub> -N              | mg/L       | UV-Visible Spectrophotometer | 0.12          | 0.22 | 0.17 | NYS                             |
| 11 | Oil and Grease                  | mg/L       | APHA 23RD EDN. 2017 (5529-B) | 2.6           | 2.3  | 2.0  | NYS                             |
| 12 | PO <sub>4</sub>                 | mg/L       | UV-Visible Spectrophotometer | 0.77          | 0.71 | 0.85 | 2.0                             |
| 13 | TPH                             | mg/L       | Gravimetric                  | <2.0          | <2.0 | <2.0 | NYS                             |

\*NOTE: ECR = Environmental Conservation Rules, UVS=UV-Visible spectrophotometer, CRM=Closed Reflex Methods, MFM=Membrane Filtration Method, NYS = Not Yet Set

| Lab Test Performed by                                                               | Reviewed and checked by                                                             | Approved By                                                                           |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| Mahadi Hasan<br>Executive (Environmental Lab),<br>BEETLSL                           | Md. Nasim Reza<br>Environmental Monitoring Officer<br>(Executive), BEETLSL          | Dr. Fatima Akter<br>Director,<br>BEETLSL                                              |
| 16.11.2024                                                                          | 16.11.2024                                                                          | 16.11.2024                                                                            |



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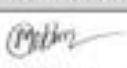
### Physical/ Chemical/ Bacteriological Analysis of Groundwater Sample

|                        |                                                                          |
|------------------------|--------------------------------------------------------------------------|
| Name of the Project    | : Dhaka and Western Zone Transmission Grid Expansion Project (Package-2) |
| Name of the Contractor | : TBEA CO., LTD                                                          |
| Description of sample  | : Groundwater                                                            |
| Location               | : Dhaka                                                                  |
| Sample Collector       | : Collected by EnviroCare Technical Team                                 |
| Analyzed by            | : BEETLSL Laboratory                                                     |
| Sample Collection Date | : 22.10.2024                                                             |

### LABORATORY TEST RESULTS

| SN | Parameters        | Unit    | Analysis Method | Concentration |       |       | Bangladesh<br>Standard<br>ECR* 2023 |
|----|-------------------|---------|-----------------|---------------|-------|-------|-------------------------------------|
|    |                   |         |                 | GW-1          | GW-2  | GW-3  |                                     |
| 1  | Arsenic (As)      | mg/L    | AAS             | 0.001         | 0.002 | 0.002 | 0.05                                |
| 2  | Chloride          | mg/L    | Titrimetric     | 28            | 41    | 33    | 250*                                |
| 3  | Coliform (Faecal) | N/100ml | MPM             | 0             | 0     | 0     | 0                                   |
| 4  | Coliform (Total)  | N/100ml | MPM             | 0             | 0     | 0     | 0                                   |
| 5  | EC                | µS/cm   | EC Meter        | 288           | 344   | 277   | NYS                                 |
| 6  | Iron (Fe)         | mg/L    | AAS             | 0.44          | 0.61  | 0.32  | 0.3-1.0                             |
| 7  | Manganese (Mn)    | mg/L    | AAS             | 0.01          | 0.01  | 0.03  | 6-9                                 |
| 8  | pH                | -       | pH Meter        | 7.3           | 7.5   | 7.1   | 1000                                |
| 9  | Salinity          | ‰       | Multimeter      | 0.07          | 0.11  | 0.12  | NYS                                 |
| 10 | TPH               | mg/L    | Gravimetric     | <2.0          | <2.0  | <2.0  | NYS                                 |
| 11 | Turbidity         | NTU     | Turbidity Meter | 0.02          | 0.05  | 0.07  | 5                                   |

\*NOTE: ECR - Environmental Conservation Rules, AAS-Atomic Absorption Spectrophotometer, MPM-Membrane Filtration Method, NYS - Not Yet Set

| Lab Test Performed by                                                               | Reviewed and checked by                                                             | Approved By                                                                           |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| <b>Mahadi Hasan</b><br>Executive (Environmental Lab),<br>BEETLSL                    | <b>Md. Nasim Reza</b><br>Environmental Monitoring Officer<br>(Executive), BEETLSL   | <b>Dr. Fatima Akter</b><br>Director,<br>BEETLSL                                       |
| 16.11.2024                                                                          | 16.11.2024                                                                          | 16.11.2024                                                                            |



## BANGLADESH ENVIRONMENTAL ENGINEERING TRAINING & LAB SERVICES LTD.

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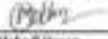
### Analysis of Soil Sample

|                        |                                                                          |
|------------------------|--------------------------------------------------------------------------|
| Name of the Project    | : Dhaka and Western Zone Transmission Grid Expansion Project (Package-2) |
| Name of the Contractor | : TBEA CO., LTD                                                          |
| Description of sample  | : Surface Soil                                                           |
| Sample Collector       | : Collected by EnviroCare Technical Team                                 |
| Analyzed By            | : BEETLS Laboratory                                                      |
| Sample Collection Date | : 22.10.2024                                                             |

### LABORATORY TEST RESULTS

| SN             | Sampling ID | Concentration presents in parameters |             |           |              |               |                     |
|----------------|-------------|--------------------------------------|-------------|-----------|--------------|---------------|---------------------|
|                |             | pH                                   | Copper (Cu) | Lead (Pb) | Cadmium (Cd) | Chromium (Cr) | Organic Carbon (OC) |
| 1              | SQ-01       | 7.5                                  | 0.57        | 5.24      | 0.07         | 10.38         | 6.77                |
| 2              | SQ-02       | 7.4                                  | 0.49        | 6.29      | 0.12         | 8.82          | 1.22                |
| 3              | SQ-03       | 7.9                                  | 0.86        | 3.44      | 0.04         | 6.32          | 0.88                |
| Unit           |             |                                      | ppm         |           |              |               |                     |
| Dutch Standard |             | NYS                                  | 36          | 85        | 0.8          | 100           | NYS                 |

\*NOTE: PPM =Parts per million, NYS= Not Yet Set

| Lab Test Performed by                                                                                                                                     | Reviewed and checked by                                                                                                                                                   | Approved By                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <br>Mahadi Hassan<br>Executive (Environmental Lab), BEETLS<br>18.11.2024 | <br>Md. Nasim Faza<br>Environmental Monitoring Officer (Executive), BEETLS<br>18.11.2024 | <br>Dr. Fatima Akter<br>Director, BEETLS<br>18.11.2024 |

Page 1 of 1

## Package 5



## Annexure - 1

## Ambient Air Quality Test Report



**EnviroCare**  
International Ltd.  
A House of Inspection, Testing, Assessment & Consultancy

**Test Results of Ambient Air Quality Analysis**

**Name of Project** : Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaligang on turnkey basis (Package-5)  
**Description of Sample** : Sample was collected from project area (In front of Hafiz Sheikh's House)  
**Sample Collector** : Collected by EnviroCare Technical Team  
**Sample Date** : 22.10.2024  
**Date of Analysis** : 23.10.2024  
**Reporting Date** : 29.10.2024

| Sl. No.             | Sample Locations                          | Concentration present different parameter in ambient air |                   |                   |                         |                         |                         |                   |
|---------------------|-------------------------------------------|----------------------------------------------------------|-------------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------|
|                     |                                           | PM <sub>10</sub>                                         | PM <sub>2.5</sub> | SPM               | SO <sub>2</sub>         | NO <sub>2</sub>         | CO                      | Pb                |
| 1                   | KAAQ1<br>In front of Hafiz Sheikh's House | 23                                                       | 88                | 91                | 4.9                     | 5.1                     | 0.46                    | BDL               |
| Unit                |                                           | µg/m <sup>3</sup>                                        | µg/m <sup>3</sup> | µg/m <sup>3</sup> | µg/m <sup>3</sup>       | µg/m <sup>3</sup>       | mg/m <sup>3</sup>       | µg/m <sup>3</sup> |
| Duration            |                                           | 24                                                       | 24                | 8                 | 24                      | 24                      | 8                       | 24                |
| Method of Analysis  |                                           | Nephelometer                                             |                   |                   | Electro-Chemical Sensor | Electro-Chemical Sensor | Electro-Chemical Sensor | AAS               |
| Bangladesh Standard |                                           | 45                                                       | 150               | 200               | 80                      | 80                      | 5                       | 0.5               |

\*Standard: Air pollution Control Rules On 20<sup>th</sup> July 2022; Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19<sup>th</sup> July, 2009, vide S.R.O. NO. 220-Law/2005

Note: This ambient air monitoring report was usually accomplished by- portable OCEANUS AQM-09 & Air Sampler with Attachment (Double Head)

Note: BDL = Below of detection level



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Environmental Base Line Monitoring Report of Design, Supply, Installation, Testing and Commissioning of 400/230KV GIS Substation at Kaligang on turnkey basis of DWZTGEP (Package-5), PGCB

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## Annexure 2

## Inspection Results of Ambient Noise Quality Analysis



**EnviroCare**  
International Ltd.  
A house of inspection, Testing, Assessment & Consultancy

**Test Results of Noise Level Analysis**

**Name of Project** : Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)  
**Description of Sample** : Sample was collected from project area (In front of Hafiz Sheikh's House)  
**Sample Collector** : Collected by EnviroCare Technical Team  
**Sample Date** : 22.10.2024  
**Date of Analysis** : 23.10.2024  
**Reporting Date** : 29.10.2024

**Sampling Location:**

| Sl. No. | Sample Location                                               | Sampling ID |
|---------|---------------------------------------------------------------|-------------|
| 1       | In front of Hafiz Sheikh's House<br>23.968813 N & 90.549103 E | KANM-1      |

**Test Results:**

| Location                                   | Concentration Present (dBA) |                  |                  |                 |                  |                  | Category    |               |
|--------------------------------------------|-----------------------------|------------------|------------------|-----------------|------------------|------------------|-------------|---------------|
|                                            | Day                         |                  |                  | Night           |                  |                  |             |               |
|                                            | L <sub>eq</sub>             | L <sub>max</sub> | L <sub>min</sub> | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> |             |               |
| KANM-1<br>In front of Hafiz Sheikh's House | 48.9                        | 55.3             | 36.1             | 38.3            | 41.1             | 25.3             | Residential |               |
| <b>Bangladesh Standard</b>                 |                             |                  |                  |                 |                  |                  | Day<br>Time | Night<br>Time |
| Industrial area                            |                             |                  |                  |                 |                  |                  | 55          | 70            |
| Commercial                                 |                             |                  |                  |                 |                  |                  | 50          | 60            |
| Mixed area                                 |                             |                  |                  |                 |                  |                  | 60          | 50            |
| Residential area                           |                             |                  |                  |                 |                  |                  | 55          | 45            |
| Silent Area                                |                             |                  |                  |                 |                  |                  | 50          | 40            |
| <b>World Bank / IFC Standard</b>           |                             |                  |                  |                 |                  |                  |             |               |
| Industrial area                            |                             |                  |                  |                 |                  |                  | 70          | 70            |
| Residential, Institutional, Educational    |                             |                  |                  |                 |                  |                  | 55          | 45            |



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## Annexure 3

## Test Results of Surface Water Quality Analysis


**BANGLADESH ENVIRONMENTAL ENGINEERING  
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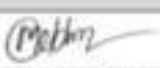
**Physical/ Chemical/ Bacteriological Analysis of Water Sample**

|                       |                                                                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Name of Project       | : Design, Supply, Installation, Testing and Commissioning of<br>400/230 KV GIS Substation at Kaliganj on turnkey basis<br>(Package-5) |
| Description of sample | : Surface water Sample collection                                                                                                     |
| Sample ID             | : KSWQ-01                                                                                                                             |
| Location              | : Nohr Khali, Kaliganj, Gazipur                                                                                                       |
| Sample Collector      | : Collected by Envirocare Technical Team                                                                                              |
| Analyzed By           | : BEETLSL Laboratory                                                                                                                  |
| Monitoring Date       | : 23 October, 2024                                                                                                                    |
| GPS Location          | : 23.966951 N; 90.552715 E                                                                                                            |

**LABORATORY TEST RESULTS:**

| Parameters                 | Unit | Concentration Present | ECR, 2023 Standard* |         |       |      |         |         |
|----------------------------|------|-----------------------|---------------------|---------|-------|------|---------|---------|
|                            |      | KSWQ 01               | a                   | b       | c     | d    | e       | f       |
| Ammonia (NH <sub>3</sub> ) | mg/l | 0.24                  | -                   | -       | -     | -    | -       | -       |
| NO <sub>2</sub>            | mg/l | 6                     | ≤2                  | ≤3      | ≤3    | ≤8   | 12      | ≤12     |
| COD                        | mg/l | 17                    | 10                  | 10      | 25    | 50   | 100     | 100     |
| DO                         | mg/l | 5.48                  | ≥6                  | ≥5      | ≥5    | ≥5   | ≥1      | -       |
| Total Nitrogen             | mg/l | <1.0                  | -                   | -       | -     | -    | -       | -       |
| Oil & Grease               | mg/l | 0.41                  | -                   | -       | -     | -    | -       | -       |
| pH                         | -    | 7.1                   | 6.5-8.5             | 6.5-8.5 | 6-9   | 6-9  | 6.5-8.5 | 6.5-8.5 |
| TDS                        | mg/l | 54                    | 1000                | 1000    | 1000  | 1000 | 1000    | 1000    |
| Total Coliform             | 17   | ≤100                  | ≤50                 | ≤5000   | ≤5000 | -    | ≤50000  | -       |
| TSS                        | mg/l | 4                     | -                   | -       | -     | -    | -       | -       |
| Turbidity                  | NTU  | 11.2                  | -                   | -       | -     | -    | -       | -       |

\*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

| Lab Test Performed by                                                                                                                            | Reviewed and checked by                                                                                                                                           | Approved By                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <br>Mahadi Hasan<br>Executive (Environmental<br>Lab), BEETLSL | <br>Md. Nasim Reza<br>Environmental Monitoring Officer<br>(Executive), BEETLSL | <br>Dr. Fatima Akter<br>Director,<br>BEETLSL |
| 23.10.2024                                                                                                                                       | 23.10.2024                                                                                                                                                        | 23.10.2024                                                                                                                        |



#### Annexure 4

### Test Results of Ground Water Quality Analysis



#### BANGLADESH ENVIRONMENTAL ENGINEERING TRAINING & LAB SERVICES LTD.

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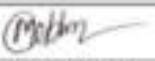
#### Physical/ Chemical/ Bacteriological Analysis of Water Sample

|                       |                                                                                                                                 |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Name of Project       | : Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5) |
| Description of sample | : Groundwater Sample collection                                                                                                 |
| Sample ID             | : KGWQ-01                                                                                                                       |
| Location              | : Hafiz Sheikh's House, Kaliganj, Gazipur                                                                                       |
| Sample Collector      | : Collected by Envirocare Technical Team                                                                                        |
| Analyzed By           | : BEETLSL Laboratory                                                                                                            |
| Monitoring Date       | : 23 October, 2024                                                                                                              |
| GPS Location          | : 23.968512 N; 90.548888 E                                                                                                      |

#### LABORATORY TEST RESULTS:

| Parameters      | Unit  | Method          | Concentration Present | ECR'2023 Standard* |
|-----------------|-------|-----------------|-----------------------|--------------------|
|                 |       |                 | KGWQ-01               |                    |
| Arsenic         | mg/l  | AAS             | 0.002                 | 0.05               |
| Cl <sup>-</sup> | mg/l  | Titrimetric     | 21                    | 250*               |
| EC              | µS/cm | Multimeter      | 231                   | -                  |
| Fe              | mg/l  | AAS             | 1.3                   | 0.3-1              |
| Mn              | mg/l  | AAS             | 0.02                  | 0.4                |
| pH              | -     | pH Meter        | 7.1                   | 6.5-8.5            |
| Turbidity       | NTU   | Turbidity Meter | 0.04                  | 5                  |

\*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)  
N.B. AAS- Atomic Absorption Spectrophotometer

| Lab Test Performed by                                                                                                                         | Reviewed and checked by                                                                                                                                        | Approved By                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <br>Mahadi Hasan<br>Executive (Environmental Lab), BEETLSL | <br>Md. Nasim Reza<br>Environmental Monitoring Officer (Executive), BEETLSL | <br>Dr. Fatima Akter<br>Director, BEETLSL |
| 28 October, 2024                                                                                                                              | 28 October, 2024                                                                                                                                               | 28 October, 2024                                                                                                               |

Environmental Base Line Monitoring Report of Design, Supply, Installation, Testing and Commissioning of 400/230KV GIS Substation at Kaliganj on turnkey basis of DWZTGEF (Package-5), PGLCB

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## Annexure 5 Surface Soil Quality Test Report



### BANGLADESH ENVIRONMENTAL ENGINEERING TRAINING & LAB SERVICES LTD.

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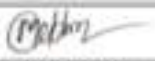
#### Physical/ Chemical/ Bacteriological Analysis of Soil Sample

|                       |                                                                                                                                 |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Name of Project       | : Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5) |
| Description of sample | : Soil Sample collection                                                                                                        |
| Sample ID             | : KSQ-01                                                                                                                        |
| Location              | : Beside Hafej Sheikh's House, Boktarpur, Kaliganj, Gazipur                                                                     |
| Sample Collector      | : Collected by Envirocare Technical Team                                                                                        |
| Analyzed By           | : BEETLSL Laboratory                                                                                                            |
| Monitoring Date       | : 23 October, 2024                                                                                                              |
| GPS Location          | : 23.968768 N, 90.549979 E                                                                                                      |

#### LABORATORY TEST RESULTS:

| Sl. No. | Parameters      | Unit | Concentration Level | * Dutch Standard |
|---------|-----------------|------|---------------------|------------------|
|         |                 |      | KSQ-1               |                  |
| 1.      | Cadmium (Cd)    | PPM  | 0.68                | 0.6              |
| 2.      | Chromium (Cr)   | PPM  | 39.32               | 100              |
| 3.      | Copper (Cu)     | PPM  | 2.71                | 36               |
| 4.      | Lead (Pb)       | PPM  | 6.12                | 65               |
| 5.      | Organic Content | %    | 7.43                | -                |
| 6.      | pH              | -    | 6.1                 | -                |
| 7.      | Texture         | mm   | 0.048               | -                |

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

| Lab Test Performed by                                                                                                                         | Reviewed and checked by                                                                                                                                        | Approved By                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <br>Mahadi Hasan<br>Executive (Environmental Lab), BEETLSL | <br>Md. Nasim Reza<br>Environmental Monitoring Officer (Executive), BEETLSL | <br>Dr. Fatima Akter<br>Director, BEETLSL |
| 29 October, 2024                                                                                                                              | 29 October, 2024                                                                                                                                               | 29 October, 2024                                                                                                               |

*Environmental Base Line Monitoring Report of Design, Supply, Installation, Testing and Commissioning of 400/230KV GIS Substation at Kaliganj on turnkey basis of DWZTGEF (Package-5), PGLB*

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## Package 6



### Annexure 1 Ambient Air Quality Test Report



**EnviroCare**  
International Ltd.  
A house of Inspection, Testing, Assessment & Consultancy

#### Test Results of Ambient Air Quality Analysis

Name of Project : Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Parbatal on turnkey basis (Package-6)  
Description of Sample : Sample was collected from project area (In front of Dulal Mia's house)  
Sample Collector : Collected by EnviroCare Technical Team  
Sample Date : 21.10.2024  
Date of Analysis : 21.10.2024  
Reporting Date : 28.10.2024

| Sl. No.             | Sample Locations                    | Concentration present different parameter in ambient air |                   |                   |                         |                         |                         |                   |
|---------------------|-------------------------------------|----------------------------------------------------------|-------------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------|
|                     |                                     | PM <sub>10</sub>                                         | PM <sub>2.5</sub> | SPM               | SO <sub>2</sub>         | NO <sub>2</sub>         | CO                      | Pb                |
| 1                   | PAAQI In front of Dulal Mia's house | 32                                                       | 78                | 107               | 6.7                     | 7.2                     | 0.39                    | BDL               |
| Unit                |                                     | µg/m <sup>3</sup>                                        | µg/m <sup>3</sup> | µg/m <sup>3</sup> | µg/m <sup>3</sup>       | µg/m <sup>3</sup>       | mg/m <sup>3</sup>       | µg/m <sup>3</sup> |
| Duration            |                                     | 24                                                       | 24                | 8                 | 24                      | 24                      | 8                       | 24                |
| Method of Analysis  |                                     | Nephelometer                                             |                   |                   | Electro-Chemical Sensor | Electro-Chemical Sensor | Electro-Chemical Sensor | AAS               |
| Bangladesh Standard |                                     | 65                                                       | 150               | 200               | 80                      | 80                      | 5                       | 0.5               |

\*Standard: Air pollution Control Rules On 26<sup>th</sup> July 2022; Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19<sup>th</sup> July, 2005; vide S.R.O. NO. 229-Law/2005

Note: This ambient air monitoring report was usually accomplished by- portable OCEANUS AQM-09 & Air Sampler with Attachment (Double Head)

Note: BDL – Below of detection level



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Environmental Baseline Monitoring Report for Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Parbatal on turnkey basis of DWZTGEP (Package-6), PGCB



## Annexure 2 Inspection Results of Ambient Noise Quality Analysis



**EnviroCare**  
International Ltd.  
A House of Inspection, Testing, Assessment & Consultancy

Ref: ECI/2023/413-09/01

### Test Results of Noise Level Analysis

**Name of Project** : Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)  
**Description of Sample** : Sample was collected from project area (in front of Dalal Mia's house)  
**Sample Collector** : Collected by EnviroCare Technical Team  
**Sample Date** : 21.10.2024  
**Date of Analysis** : 21.10.2024  
**Reporting Date** : 28.10.2024

#### Sampling Location:

| Sl. No | Sample Locations                                           | Sampling ID |
|--------|------------------------------------------------------------|-------------|
| 1      | In front of Dalal Mia's house<br>23.804745 N & 90.475699 E | PANM-1      |

#### Test Results:

| Location                                | Concentration Present (dBA) |                  |                  |                 |                  |                  | Category               |
|-----------------------------------------|-----------------------------|------------------|------------------|-----------------|------------------|------------------|------------------------|
|                                         | Day                         |                  |                  | Night           |                  |                  |                        |
|                                         | L <sub>eq</sub>             | L <sub>max</sub> | L <sub>min</sub> | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> |                        |
| PANM-1<br>In front of Dalal Mia's house | 53.52                       | 61.8             | 36.0             | 50.95           | 60.1             | 33.4             | Mixed                  |
| <b>Bangladesh Standard</b>              |                             |                  |                  |                 |                  |                  | Day Time<br>Night Time |
| Industrial area                         |                             |                  |                  |                 |                  |                  | 75<br>50               |
| Commercial                              |                             |                  |                  |                 |                  |                  | 70<br>40               |
| Mixed area                              |                             |                  |                  |                 |                  |                  | 60<br>55               |
| Residential area                        |                             |                  |                  |                 |                  |                  | 55<br>45               |
| Silent Area                             |                             |                  |                  |                 |                  |                  | 50<br>40               |
| <b>World Bank / IFC Standard</b>        |                             |                  |                  |                 |                  |                  | Day Time<br>Night Time |
| Industrial area                         |                             |                  |                  |                 |                  |                  | 70<br>50               |
| Residential, Institutional, Educational |                             |                  |                  |                 |                  |                  | 55<br>45               |



*(Signature)*

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*Environmental Baseline Monitoring Report for Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis of DWZTGP (Package-6), PGCB*



### Annexure 3 Test Results of Surface Water Quality Analysis



#### BANGLADESH ENVIRONMENTAL ENGINEERING TRAINING & LAB SERVICES LTD.

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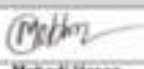
#### Physical/ Chemical/ Bacteriological Analysis of Water Sample

|                       |                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Name of Project       | : Design, Supply, Installation, Testing and Commissioning of<br>400/230/132 KV GIS Substation at Purbachal on turnkey<br>basis (Package-6) |
| Description of sample | : Surface water Sample collection                                                                                                          |
| Sample ID             | : PSWQ-01                                                                                                                                  |
| Location              | : Khal Beside Dulal Mia's Shop, Purbachal, Gauripur                                                                                        |
| Sample Collector      | : Collected by Environment Technical Team                                                                                                  |
| Analyzed By           | : BEETLSL Laboratory                                                                                                                       |
| Monitoring Date       | : 22 October, 2024                                                                                                                         |
| GPS Location          | : 23.864316 N; 90.475926 E                                                                                                                 |

#### LABORATORY TEST RESULTS:

| Parameters                 | Unit | Concentration Present | ECR, 2023 Standard* |         |       |       |         |         |
|----------------------------|------|-----------------------|---------------------|---------|-------|-------|---------|---------|
|                            |      | PSWQ 01               | a                   | b       | c     | d     | e       | f       |
| Ammonia (NH <sub>3</sub> ) | mg/l | 0.24                  | -                   | -       | -     | -     | -       | -       |
| BOD <sub>5</sub>           | mg/l | 6                     | ≤2                  | ≤3      | ≤3    | ≤6    | 12      | ≤12     |
| COD                        | mg/l | 19                    | 10                  | 10      | 25    | 50    | 100     | 100     |
| DO                         | mg/l | 5.21                  | ≥6                  | ≥5      | ≥5    | ≥5    | ≥1      | -       |
| Total Nitrogen             | mg/l | <1.0                  | -                   | -       | -     | -     | -       | -       |
| Oil & Grease               | mg/l | 0.49                  | -                   | -       | -     | -     | -       | -       |
| pH                         | -    | 7.2                   | 6.5-8.5             | 6.5-8.5 | 6-9   | 6-9   | 6.5-8.5 | 6.5-8.5 |
| TDS                        | mg/l | 61                    | 1000                | 1000    | 1000  | 1000  | 1000    | 1000    |
| Total Coliform             | -    | 21                    | ≤100                | ≤50     | ≤5000 | ≤5000 | -       | ≤50000  |
| YSS                        | mg/l | 4                     | -                   | -       | -     | -     | -       | -       |
| Turbidity                  | NTU  | 12.3                  | -                   | -       | -     | -     | -       | -       |

\*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

| Lab Test Performed by                                                               | Reviewed and checked by                                                             | Approved By                                                                           |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| Mahadi Hasan<br>Executive (Environmental<br>Lab), BEETLSL                           | Mr. Nasim Reza<br>Environmental Monitoring Officer<br>(Executive), BEETLSL          | Dr. Fatima Akter<br>Director,<br>BEETLSL                                              |
| 27.10.2024                                                                          | 27.10.2024                                                                          | 27.10.2024                                                                            |

Environmental Baseline Monitoring Report for Design, Supply, Installation, Testing and Commissioning of  
400/230/132 KV GIS Substation at Purbachal on turnkey basis of DWZTGP (Package-6), PGCB

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#### Annexure 4 Test Results of Ground Water Quality Analysis



#### BANGLADESH ENVIRONMENTAL ENGINEERING TRAINING & LAB SERVICES LTD.

Mamun Plaza (First Floor) 33, Shaheed Nazim Islam Charak, Hatkhola, Tikahuli, Dhaka - 1203,  
Bangladesh, Phone: +88-02-7173845, Mobile: +88-01713034889  
Email: info.beetls@gmail.com



Customer/Accounts/Office Copy

#### Physical/ Chemical/ Bacteriological Analysis of Water Sample

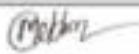
|                       |                                                                                                                                      |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Name of Project       | : Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6) |
| Description of sample | : Groundwater Sample collection                                                                                                      |
| Sample ID             | : PGWQ-01                                                                                                                            |
| Location              | : Beside Dulal Mia's Shop, Purbachal, Gazipur                                                                                        |
| Sample Collector      | : Collected by Envirocare Technical Team                                                                                             |
| Analyzed By           | : BEETLSL Laboratory                                                                                                                 |
| Monitoring Date       | : 22 October, 2024                                                                                                                   |
| GPS Location          | : 23.964612 N, 90.475215 E                                                                                                           |

#### LABORATORY TEST RESULTS:

| Parameters      | Unit  | Method          | Concentration Present | ECN 2023 Standard* |
|-----------------|-------|-----------------|-----------------------|--------------------|
|                 |       |                 | PGWQ-01               |                    |
| Arsenic         | mg/l  | AAS             | 0.001                 | 0.05               |
| Cl <sup>-</sup> | mg/l  | Titrimetric     | 17                    | 250*               |
| EC              | µS/cm | Multimeter      | 241                   | -                  |
| Fe              | mg/l  | AAS             | 1.2                   | 0.3-1              |
| Mn              | mg/l  | AAS             | 0.03                  | 0.4                |
| pH              | -     | pH Meter        | 7.2                   | 6.5-8.5            |
| Turbidity       | NTU   | Turbidity Meter | 0.02                  | 5                  |

\*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)

N.B: AAS- Atomic Absorption Spectrophotometer

| Lab Test Performed by                                                                                                                         | Reviewed and checked by                                                                                                                                        | Approved By                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <br>Mahadi Hasan<br>Executive (Environmental Lab), BEETLSL | <br>Md. Nasim Reza<br>Environmental Monitoring Officer (Executive), BEETLSL | <br>Dr. Fatima Akter<br>Director, BEETLSL |
| 27.10.2024                                                                                                                                    | 27.10.2024                                                                                                                                                     | 27.10.2024                                                                                                                     |

Environmental Baseline Monitoring Report for Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis of DWZTGEP (Package-6), PGCB



**Annexure 5**  
**Surface Soil Quality Test Report**  
**BANGLADESH ENVIRONMENTAL ENGINEERING**  
**TRAINING & LAB SERVICES LTD.**

Mamun Plaza (First Floor) 31, Shahid Nazim Islam Sharak, Hatikola, Tikatuli, Dhaka - 1203,  
Bangladesh, Phone: +88-02-7175845, Mobile: +88-01713054889  
Email: info.beetls@gmail.com



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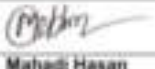
**Physical/ Chemical/ Bacteriological Analysis of Soil Sample**

|                       |                                                                                                                                      |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Name of Project       | : Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6) |
| Description of sample | : Soil Sample collection                                                                                                             |
| Sample ID             | : PSQ-01                                                                                                                             |
| Location              | : In front of Dulal Mia's house, Purbachal, Kaliganj, Gazipur                                                                        |
| Sample Collector      | : Collected by Envirocare Technical Team                                                                                             |
| Analyzed By           | : BEETLSL Laboratory                                                                                                                 |
| Monitoring Date       | : 22 October, 2024                                                                                                                   |
| GPS Location          | : 23.834784 N, 90.476048 E                                                                                                           |

**LABORATORY TEST RESULTS:**

| Sl. No. | Parameters      | Unit | Concentration Level | * Dutch Standard |
|---------|-----------------|------|---------------------|------------------|
|         |                 |      | PSQ-1               |                  |
| 1       | Cadmium (Cd)    | PPM  | 0.72                | 0.8              |
| 2       | Chromium (Cr)   | PPM  | 46.63               | 100              |
| 3       | Copper (Cu)     | PPM  | 2.54                | 36               |
| 4       | Lead (Pb)       | PPM  | 7.31                | 85               |
| 5       | Organic Content | %    | 9.47                | -                |
| 6       | pH              | -    | 6.3                 | -                |
| 7       | Texture         | mm   | 0.043               | -                |

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

| Lab Test Performed by                                                                                                                                | Reviewed and checked by                                                                                                                                               | Approved By                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>Mahadi Hasan</b><br>Executive (Environmental Lab), BEETLSL | <br><b>Md. Nasim Reza</b><br>Environmental Monitoring Officer (Executive), BEETLSL | <br><b>Dr. Fatima Akter</b><br>Director, BEETLSL |
| 27.10.2024                                                                                                                                           | 27.10.2024                                                                                                                                                            | 27.10.2024                                                                                                                            |

*Environmental Baseline Monitoring Report for Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis of DWZTGE (Package-6), PGCB*

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## Annexure-34: Status of CAP of the Existing Substations



Switchyard of Existing Satkhira Substation



Switchyard of Existing Kushtia Substation

## Annexure-35: Letter to the Contractors for Conducting Quarterly Environmental Monitoring



Power Grid Bangladesh PLC  
Dhaka & Western Zone Transmission Grid  
Expansion Project  
Head Office: Avenue-3, Jahurul Islam City,  
Afabazar, Huda, Dhaka-1212

Record Number: ZT.21.0000.453.14.008.21.1546

Date: 09/12/2024

Subject: Submission of Quarterly Environmental Monitoring Report

Reference: Environment and Social Unit, Power Grid's letter no: ZT.21.0000.402.14.101.24.6264

Dear Sir,

With great concern, we have observed that quarterly environmental monitoring reports are not being submitted from your end in a timely manner. As a result the overall compliance status of the project is being severely hampered. From now on, if any of the EPC contractors fail to submit the required reports within the due date, we will report the same to ADB and ADB will take actions against the default contractor as per its policy which may result in being listed as a non-compliance organization. This will have a negative impact on your organization's portfolio not only for this project but also for future projects funded by ADB, WB etc. To avoid such a serious consequence, please ensure compliance to the following points:

1. Environmental monitoring report for Q3-2024 to be submitted within December 15, 2024 for all the components under every contract.
2. Quarterly environmental monitoring report starting from Q4-2024 to onwards to be submitted within 15 days of end of the respective quarters. Project office will issue no more notice in this regard.
3. The contractors must not involve any entity/person who are engaged with Power Grid in any capacity for the environmental monitoring activities. Conflict of interest must be avoided.
4. Laboratory reports must be submitted from accredited laboratories only. Power Grid will verify the lab reports and if any discrepancy is observed, it will be listed as a fraudulent activity.
5. No trees to be cut/felled without approval of a comprehensive tree plantation plan by Power Grid.

Your prompt action on the above issue will be highly appreciated.

**Attachments:**

- 1) letter

09-12-2024  
Md. Abdul Karim  
Project Director (Chief Engineer)  
pd.dwtgpp@pgb.gov.bd

**Distribution:**

1. Project Manager, Larsen and Toubro (L&T Ltd. (for package-3);
2. Project Manager, Transrad Lighting Ltd. (for package-4);
3. Project Manager, CET Ltd. (for package 5 & 6) and
4. Project Manager, CMCC-CNEC JV (for package-7).

Record Number: 27.21.0000.455.14.004.21.1546/1(5)

Date: 09/12/2024

**Copy to:**

1. Superintending Engineer, Planning, Power Grid Bangladesh PLC;
2. Manager, Environment & Social Unit, Power Grid Bangladesh PLC;
3. Deputy Project Director(SE), Dhaka & Western Zone Transmission Grid Expansion Project, Power Grid Bangladesh PLC;
4. Executive Engineer, Dhaka & Western Zone Transmission Grid Expansion Project, Power Grid Bangladesh PLC and
5. Executive Engineer, Dhaka & Western Zone Transmission Grid Expansion Project, Power Grid Bangladesh PLC.



09/12/2024

Barwan Ahmed Khan  
Sub-Divisional Engineer